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U.S. Department of the Interior

Bureau of Land Management

Gold Discovery Group Drilling Exploration Project

Environmental Assessment
DOI-BLM-CA-D050-2023-0007-EA
Applicant: Gold Discovery Group, LLC
Plan of Operation CACA-59184

Bureau of Land Management
Ridgecrest Field Office
300 South Richmond Road
Ridgecrest, California 93555

View of drilling area north of Randsburg & Johannesburg, to either side of U.S. Highway 395.

February 2023

1 INTRODUCTION

1.1 Summary of Proposed Project

Gold Discovery Group LLC (the proponent) originally submitted a proposal in 2020 to enter, drill, gather direct samples for retrieval & analysis from certain placer claims as submitted per 43 CFR 3809.401. The proposal called for drilling 337 shallow holes on 32 unpatented placer claims in the vicinity of Randsburg, Johannesburg, and Atolia within Kern County and San Bernardino County, California. The final number of proposed drill holes was reduced, in cooperation with BLM, to 293 in order to mitigate or eliminate conflicts with other resources (see location maps in Appendix A).

The proposed project area is open to mineral entry under the Mining Law of 1872, but is within the Fremont-Kramer Area of Critical Environmental Concern (ACEC) and/or the Fremont-Kramer unit of Critical Desert Tortoise Habitat as designated by federal regulation 50 CFR 17.95.[1]

Surface Management regulations 43 CFR 3809.11 require that any operations causing disturbance greater than casual use must have a BLM-authorized Plan of Operations (Plan) within any designated Area of Critical Environmental Concern (43 CFR 3809.11(c)(3)) or lands designated as critical habitat for any species listed as threated or endangered under the Endangered Species Act. The National Environmental Policy Act (NEPA) requires BLM to analyze pertinent impacts to federal lands & resources when considering whether to approve, or not approve the applicant's exploration plan. This Environmental Assessment is intended to fulfill BLM's need to analyze and disclose the impacts of this proposal under NEPA.

1.2 Purpose and Need

The BLM's purpose is to respond to the proponent's Plan to access mining claims for mineral exploration on land managed by the BLM Ridgecrest Field Office. The BLM will evaluate the Plan in accordance with 30 USC 21 (Mining Law of 1872, as amended) and Surface Management Regulations 43 CFR 3809.

The need for the BLM to respond to this Plan is established by the policies and mandates set forth in the applicable Land Use Plan(s) (see Section 1.4) and by the Federal Land Policy and Management Act of 1976 (FLPMA; 43 USC 1701). Section 302b of this Act requires BLM to respect the rights of locators established by the Mining Law of 1872, including a claimant's rights of ingress and egress, while also taking any action necessary to prevent unnecessary or undue degradation of the public lands (43 USC 1732(b)). The BLM has been given authority under the Mining and Minerals Policy Act of 1970 (43 USC 1701(a)(12) and 30 USC 21a) and related policies for mining claims under the general mining laws (43 CFR 3800).

1.3 Decision to Be Made

BLM will decide whether to approve, approve with modification, or deny the proposal for Gold Discovery Group LLC to gather drilling samples from certain unpatented placer mining claims consistent with Surface Management regulations 43 CFR 3809.

[1] Map of the Fremont-Kramer critical habitat unit: https://images.federalregister.gov/EC01JN91.060/large.png

1.4 Land Use Conformance

Federal regulation 43 CFR 3809.420(a)(3) requires that all mining operations not classified as "casual use" must comply with applicable BLM land-use plans, consistent with the mining laws.[2] The proposed action and alternatives conform with the minerals program resource management guidance provided under the California Desert Conservation Area (CDCA) Management Plan of 1980 as amended (BLM 1999). Pertinent amendments to the CDCA Plan are the West Mojave Management Plan (WEMO) (BLM 2006) and the Desert Renewable Energy Conservation Plan (DRECP) (BLM 2016a). The WEMO and DRECP Plans are Land Use Plan Amendments (LUPAs) to the CDCA Plan, which remains in effect except where subsequent plan amendments have made changes.

The Proposed Action has been reviewed to ensure conformance with the applicable Land Use Plans (LUPs) per 43 CFR 1610.5-3 and would not require a land use plan amendment.

1.4.1 Conservation Management Actions

The following Conservation Management Actions (CMAs) from the DRECP Land Use Plan Amendment (BLM 2016a) are applicable to the proposed project due to the Project location and the types of activities proposed. These measures are summarized below as:

- **LUPA-AIR-1** All activities must meet applicable air quality standards.
- *** LUPA-BIO-2** Designated biologist(s) will conduct, and oversee where appropriate, activity-specific required biological monitoring during pre-construction, construction, and decommissioning to ensure that avoidance and minimization measures are appropriately implemented and are effective. The appropriate required monitoring will be determined during the environmental analysis and BLM approval process. The designated biologist(s) will submit monitoring reports directly to BLM.
- *** LUPA-BIO-5** All activities, as determined appropriate on an activity-by-activity basis, will implement a worker education program that meets the approval of the BLM. The program will be carried out during all phases of the project (site mobilization, ground disturbance, grading, construction, operation, closure/decommissioning or project abandonment, and restoration/reclamation activities).
- *** LUPA-BIO-6** Subsidized predator standards, approved by BLM, in coordination with the USFWS and CDFW, will be implemented during all appropriate phases of activities, including but not limited to renewable energy activities, to manage predator food subsidies, water subsidies, and breeding sites.
- **LUPA-BIO-7** Where BLM Special Status Species habitats may be affected by ground-disturbance and/or vegetation removal during pre-construction, construction, operations, and decommissioning related activities but are not converted by long-term (i.e., more than two years of disturbance, see Glossary of Terms) ground disturbance, restore these areas following the standards, approved by BLM authorized officer, following the most recent BLM policies and procedures for the vegetation community or species habitat disturbance/impacts as appropriate.

[2] Land Use Plans are treated in Section 202 of the Federal Land Policy and Management Act (FLPMA). However, Section 302b of FLPMA states that *"Except as provided in section 314, section 603, and subsection (f) of section 601 of this Act and in the last sentence of this paragraph, no provision of this section or any other section of this Act shall in any way amend the Mining Law of 1872 or impair the rights of any locators or claims under that Act, including, but not limited to, rights of ingress and egress. In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands."*

- **LUPA-BIO-9** Implement measures to prevent leaks, spills, or releases which might impact water resources.
- *** LUPA-BIO-10** Implement measures to prevent the introduction or subsidy of invasive weeds and non-native species.
- *** LUPA-BIO-13** Minimize surface disturbance during project siting and design.
- *** LUPA-BIO-14** Implement measures to protect special status species.
- **LUPA-BIO-IFS-4** In areas where protocol and clearance surveys are required, prior to construction or commencement of any long-term activity that is likely to adversely affect desert tortoises, desert tortoise exclusion fencing shall be installed around the perimeter of the activity footprint. Substitute measures, such as on-site biological monitors in the place of the fencing requirement, may be required, as appropriate.
- **LUPA-BIO-IFS-6** When working in areas where protocol or clearance surveys are required, biological monitoring will occur with any geotechnical boring or geotechnical boring vehicle movement to ensure no desert tortoises are killed or burrows are crushed.
- *** LUPA-BIO-IFS8** Check under vehicles and equipment for tortoises before moving. If a tortoise is found underneath one, operator must wait until it leaves on its own accord.
- *** LUPA-BIO-IFS9** Vehicular traffic will not exceed 15 miles per hour on BLM access roads and within the project area.
- **LUPA-BIO-PLANT-1** Conduct surveys for BLM special status plant species.
- **LUPA-CUL-4** Design activities to minimize impacts on cultural resources including places of traditional cultural and religious importance to federally recognized Tribes.
- **LUPA-REC-1** Maintain recreation setting characteristics.
- **LUPA-SW-1** Measures to protect soil and water resources.
- **LUPA-SW-10** To the extent possible, avoid disturbance of desert biologically intact soil crusts, and soils highly susceptible to wind and water erosion.
- **LUPA-VRM-1** Manage in accordance with VRM classes.

Mitigation measures in the above list marked with an asterisk are also “Measures Authorized by USFWS” (USFWS 2023) identified as part of the BLM consultation process with USFWS for the proposed project.

1.5 Relationship to Statutes, Regulations, and Other National Environmental Policy Act Documents

Necessary permits and approvals would be obtained prior to implementation of the proposed project. These permits and approvals are mandated by the laws, regulations, orders, and memoranda included in Table 1.1.

Table 1.1. Permits, Regulations, and Approvals Relevant to the Proposed Project

Permit/Regulation/Approval	Issuing Agency	Status
Federal Permit, Approval, or Clearance		
Mining Plan Approvals	BLM	Subject of this EA.
Section 7 of the Endangered Species Act	U.S. Fish and Wildlife Service (USFWS)	The proposed project is covered by the BLM 2017 Biological Opinion (BO) for Activities in the California Desert Conservation Area, with tortoise conservation measures and reporting requirements.
Clean Water Act (CWA) Section 402 Construction General Permit (Stormwater)	California Environmental Protection Agency (CalEPA)	Impacts to water quality are described in Table 1.3. The proponent would apply with CalEPA for a permit if required, based on anticipated stormwater discharge.
Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703–712)	BLM	The BLM would ensure the agency decision complies with MBTA preconstruction nesting survey requirements.
CWA Section 404 Permitting Discharges of Dredge or Fill Material into Waters of the U.S. (including wetlands)	U.S. Army Corps of Engineers	Based on a desktop review of public GIS data the National Hydrography Dataset (NHD)(USGS 2022) and on field inspection, there are no potentially jurisdictional water features within the footprint of the proposed project.
National Historic Preservation Act of 1966, as amended	BLM	Section 106 of the National Historic Preservation Act (NHPA) requires agencies to make a reasonable and good faith effort to identify historic properties that may be affected by an agency's undertakings and take those effects into account in making decisions. The BLM process for implementing this NHPA requirement is set forth in the State Protocol Agreement Among the California State Director of the Bureau of Land Management and the California State Preservation Officer and the Nevada State Historic Preservation Officer (BLM, CA SHPO, NV SHPO 2019). Pursuant to 36 CFR § 800.8(a), the BLM has taken efforts to coordinate compliance with Section 106 and its implementing regulations at 36 CFR § 800 with any steps taken to meet the requirements of the National Environmental Policy Act.
State and/or County Permit, Approval, or Clearance		
California Environmental Quality Act (CEQA)	Kern and San Bernardino Counties	The proponent would, if determined necessary by the pertinent lead agency under State law, coordinate at the County level to fulfill applicable CEQA requirements.

Permit/Regulation/Approval	Issuing Agency	Status
Surface Mining and Reclamation Act (SMARA)	California Department of Conservation: Division of Mine Reclamation (DMR) and the State Mining and Geology Board (SMGB)	The proponent would, where required to by law, coordinate with DMR and SMGB to fulfill applicable SMARA requirements. Mineral-related actions are exempt from SMARA if they disturb less that one acre of land and less than 1000 cubic yards of material. County governments function as the lead agency for SMARA.
CWA Section 401 Water Quality Permit	CalEPA	Based on a desktop review of public GIS data, field inspection and the National Hydrography Dataset (NHD)(USGS 2022), there are no potentially jurisdictional water features within the footprint of the proposed project.
Clean Air Act	CalEPA	Impacts to air quality are described in Table 1.3. The proponent would apply with CalEPA for a permit if required, based on anticipated emissions.
CA Endangered Species Act	California Department of Fish and Wildlife (CDFW)	The project proponent would be responsible for ensuring the proposed project complies with this act.
CA Desert Native Plants Act	CDFW	The project proponent would be responsible for ensuring the proposed project complies with this act.

1.6 Scoping and Issues

1.6.1 Scoping

The BLM held a project kick-off meeting with the RIFO National Environmental Policy Act (NEPA) Interdisciplinary Team on March 8, 2022, to identify issues for analysis and to establish the rationale for issues not presented in detail. The results of that scoping are discussed below.

1.6.2 Issues Identified for Detailed Analysis

Using the input from the BLM Interdisciplinary Team during internal scoping, a list of issues to address in the EA was developed in accordance with guidelines found in BLM NEPA Handbook H-1790-1 (BLM 2008). The applicable DRECP CMAs (Section 1.4.1), project design features (Section 2.1.1), and required performance measures (Appendix C) were reviewed and evaluated for sufficiency to mitigate or minimize impacts. Where these measures may not mitigate impacts of the proposed action below significance, the following issues were retained for detailed analysis.

The key issues identified during internal scoping and analyzed in this EA are summarized in Table 1.2. The indicators provided are used in Chapter 3 to describe the affected environment for each issue and to assess the impact of the Proposed Action relative to the No Action Alternative.

Table 1.2. Issues Identified for Detailed Analysis

Issue Number	Issue Statement	Impact Indicator
Issue 1	How would vegetation removal associated with the proposed exploratory drilling impact wildlife habitat (including special status animal and plant species) in the Fremont-Kramer Area of Critical Environmental Concern?	Acres of habitat disturbance.
Issue 2	How would this project affect cultural resources, Native American and/or religious concerns?	Ground disturbing activity or other impacts to significant cultural resources, or to places of importance to Native Americans

1.6.3 Issues Not Presented in Detail

An issue was dismissed from detailed analysis if the issue was not present, would not be impacted, or if potential impacts would be mitigated through implementation of Conservation Management Actions, Project Design Features (Section 2.1.1), and/or required performance measures. The following issues are not discussed in further detail in this EA for the reasons described in Table 1.3.

Table 1.3. Issues Not Presented in Detail

<table>
<tr><th>Issue Statement</th><th>Rationale for Not Retaining Issue for Detailed Analysis in the EA</th></tr>
<tr><td>How would emissions (including fugitive dust emissions) generated by the proposed action impact air quality?</td><td>The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. Areas are classified as “attainment” (meeting all NAAQS) or “nonattainment” (an exceedance of one or more criteria pollutants). The counties in which the proposed project would be held (San Bernardino County, and Kern County, California) are (in part) classified as a nonattainment area for two pollutants: ozone and PM10. The CAA general conformity rules apply in nonattainment areas; because of this, the proposed project must conform with the State Implementation Plan (SIP) to remedy the air pollution problem.
The BLM has calculated the estimated direct and indirect emissions from the proposed project including tailpipe and fugitive dust emissions from the project equipment operating within the proposed project area:
<table><tr><th>Tons per Year (tpy)</th><th>NOx</th><th>CO</th><th>VOC</th><th>SOx</th><th>PM10</th><th>PM2.5</th></tr><tr><td>Project Emissions</td><td>0.861</td><td>0.152</td><td>0.054</td><td>0.001</td><td>0.068</td><td>0.004</td></tr><tr><td>MDAQMD de minimis Thresholds</td><td>25</td><td>100</td><td>50</td><td>100</td><td>70</td><td>70</td></tr></table>
As shown above, these emission estimates are below the de minimis thresholds established by MDAQMD, the more restrictive of the two airbasins (MDAQMD 1994, EKAPCD 1994) which this project spans. Consequently, the proposed project would be exempt from further air quality analysis under the CAA. The proponent (Gold Discovery Group LLC) would be required to take sufficient action necessary to ensure the event continues to meet local, state, and federal CAA requirements. Potential air quality control measures available to the proponent include, but are not limited to, phasing of project operations, application of water to travel routes for dust suppression, and other similar techniques.
Based on the foregoing, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.</td></tr>
<tr><td>How would emissions from the proposed action impact greenhouse gases (GHG)?</td><td>Based on BLM estimates, the proposed project would generate up to 80 metric tons of CO2 equivalent (CO2e). For comparison, the proposed project would contribute up to an additional approximately 0.000001% of all California CO2e emissions (418.2 MMT) and 0.00001% of all U.S. CO2e emissions (5,222 MMT).
GHG emissions from the proposed project would thus contribute incrementally to documented ongoing and reasonably foreseeable climate-related effects. However, the potential effects of GHG emissions are inherently global and cumulative in nature, as individual sources of GHG emissions are not large enough to have an appreciable effect on climate change. Thus, measures to reduce the adverse effects of climate change from the use of mobile sources are best addressed at the state or national level, as recently articulated in Executive Order 14008, Tackling the Climate Crisis at Home and Abroad.
Based on the foregoing, the proposed project would not result in an appreciable increase in global GHG emissions; therefore, detailed analysis is not warranted.</td></tr>
<tr><td>How would the proposed action impact environmental justice populations?</td><td>There are no environmental justice populations, as defined under Executive Order 12898, that would be affected by the Proposed Action, and there would be no disproportionate impacts to minority or low-income populations.
Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.</td></tr>
</table>

Issue Statement	Rationale for Not Retaining Issue for Detailed Analysis in the EA
What are the potential impacts from waste (hazardous materials) generated by the construction and operation of the proposed action?	The proponent would follow all applicable laws and regulations, including the required performance standards of 43 CFR 3809.420 (see Appendix C) that limit the storage and use of hazardous materials on-site and regulate waste management, which would effectively mitigate impacts below significance. No chemicals subject to reporting under Emergency Planning and Community Right-To-Know Act (or SARA Title III – Tier II) in an amount equal to or greater than 10,000 pounds would be used, produced, stored, transported, or disposed of annually in association with the proposed project. No extremely hazardous substances, as defined in 40 CFR 355, in threshold wastes (hazardous or planning quantities) would be used, produced, stored, sold, transported, or disposed of in association with the proposed projects. Trash would be confined in a covered container and hauled to an approved landfill. Human waste would be contained and disposed of at an approved sewage treatment facility. Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would the proposed action impact realty and public land access?	The Proposed Action has drilling locations near, but not within any rights-of-way for a public road or highway. Likewise, some drilling locations may be near, but never on any BLM route authorized for public access. The project not expected to interfere with access to public lands, nor to interfere with existing rights-of-ways or federal realty actions. Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would activities associated with this action impact grazing resources?	The proposed project area is located within the 243,598-acre Cantil Common allotment (CA-05005). The Proposed Action would temporarily disturb considerably less than 0.001% of vegetated surface for the total allotment acreage. The Proposed Action is not expected to impede livestock mobility nor directly impact any existing range improvements or long-term trend plots. Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would the proposed action impact recreation?	The proposed action is not expected to block or prevent access to any designated routes authorized for public use. There would be no long-term impacts to recreation opportunities from the Proposed Action. Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would the proposed action impact soils?	The Proposed Action would lead to roughly 14.7 acres of temporary rubber-tire tracks across public lands (see maps in Appendix A). The proposed action would rake all tracks as the drill rig leaves each site. The resulting short-term impact to soil appearance would be expected to fade within two years. Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would the proposed action impact Native American sacred sites (traditional cultural properties)?	No traditional cultural properties have been identified within the proposed project area. The project would not affect access to any traditional cultural properties known to BLM. Due to these circumstances, potential impacts to this resource are not expected, thus detailed analysis is not warranted.

Issue Statement	Rationale for Not Retaining Issue for Detailed Analysis in the EA
How would the proposed action impact scenic quality and visual resources?	The proposed project area is located within an area designated as Visual Resources Management Class III, which allows for management activities that may attract attention but should not dominate the view of the casual observer (BLM 1986). U.S. Highway 395 traverses through the approximate center of the proposed 293 drill sites (refer to maps of the project area in Appendix A). The mobile drill rig associated with the proposed project is not expected to remain at any one location for more than a day. Photos 1 and 2 in Appendix B shows the visual appearance of the single drill rig to be used on the proposed 293 drill sites. Given that the visual field of view around this project area includes extensive evidence of historic mining activity associated with Johannesburg, Randsburg, Atolia and Red Mountain, California, plus the visual impact presented by Highway 395 and incident traffic, it is unlikely this proposed action would dominate the view of casual observers in the area. The proposed action conforms with the management guidelines for Class III visual resource management. Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would the proposed action impact drinking water sources, groundwater, surface waters, or aquatic life?	No impacts to drinking water, groundwater and surface water quality and quantity, or aquatic life are anticipated due to the shallow average depth of drilling (30 feet). No currently available water data suggests this operation would encounter groundwater resources (USGS 2023). Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would the proposed action affect the potential spread of noxious weeds and invasive plants?	No federally listed or state-listed Class A or B noxious weeds (California Department of Agriculture 2021; Natural Resources Conservation Service [NRCS] 2021a) were observed during the May 2021 biological survey (Phoenix Biological Consulting 2021). The proposed project would be in compliance with the Federal Noxious Weed Act and California Executive Order 00-22. Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would the proposed action impact lands with wilderness characteristics?	The proposed project area is in a region with a high degree of anthropogenic disturbance and has not been identified as having wilderness characteristics. Due to these circumstances, potential impacts to this resource have been mitigated to an extent that detailed analysis is not warranted.
How would the proposed surface disturbance impact noise, travel, public health and safety, and other quality-of-life concerns of nearby residences?	Existing access roads within the surrounding area are shared with residents and dispersed recreationists, with few residential properties in the vicinity. No residences are in the immediate vicinity of any drill site (Refer to maps, Appendix A). Due to these circumstances, potential impacts to these areas of concern have been mitigated to an extent that detailed analysis is not warranted.
How would activities incident to this proposed action impact socioeconomic conditions?	No effect to local, regional, or other socioeconomic conditions are expected from this action. Due to these circumstances, potential impacts to socioeconomic conditions have been mitigated to an extent that detailed analysis is not warranted.

2 PROPOSED ACTION and ALTERNATIVES

2.1 Proposed Action

On October 23, 2020, Gold Discovery Group LLC submitted a proposal to drill 337 shallow holes on 32 unpatented placer claims in the vicinity of Randsburg, Johannesburg and Atolia within Kern County and San Bernardino County, California (claims listed in Table 2.1, below). The final number of proposed drill holes has since been reduced to 293 in order to mitigate or eliminate conflicts with other resources. The proponent would drill to obtain direct samples at depth from the 32 unpatented placer claims listed in Table 1. See Appendix A for the proposed drilling locations and access routes.

The proponent proposes to drive a four-wheeled mobile drill rig to each drill site (see photographs in Appendix B). The mobile drill rig, operating on large, heavy-equipment rubber tires approximately 2 feet in width (total track width: 4 feet), would utilize existing county and BLM roads (including both active and inactive BLM designated routes) to the greatest extent possible, but some cross-country driving would occur (see maps in Appendix A). One pickup truck or similar light-duty vehicle would follow the drill rig's tracks. Disturbance would consist of tire tracks and the direct drilling of 8"-diameter hollow-stemmed auger drill holes. Drill cuttings would be temporarily stockpiled on the tracks, then backfilled into the hole promptly after samples have been gathered from the cuttings.

Vegetation would be avoided to the extent reasonably practical, however, the project may temporarily impact up to 134,743 feet (25.5 miles) of vegetation, or a total of 12.373 acres of temporary disturbance through drive-and-crush; however, vegetation would not be mowed. Each 8-inch-diameter drill hole would additionally contribute approximately 165 square inches of disturbance, multiplied by 293 holes for a subtotal of approximately 337 square feet (0.007 acres) of drilling disturbance. An additional 1.29 acres of turnaround disturbance are proposed, bringing the total proposed disturbance to 14.7 acres after rounding (see Table 2.1 below).

Table 2.1. Proposed Project Disturbance

Disturbance Source	***Acres***
Drill Holes (293 @ 165 square inches ea.)	0.007
Off-road travel (25.5 miles @ 4-foot track width)	13.373
Off-road turnaround	1.289
Total Disturbance	**14.669**

The proposed project would utilize the following equipment:

- One mobile drill rig (equipped with 8-inch-diameter hollow-stemmed auger).
- One pickup truck or similar light-duty four-wheel-drive vehicle.
- Rakes, shovels, and similar hand tools.

No road construction or blading is involved in this proposal. No construction of access routes, drill pads or pits is required or anticipated. The above-listed tools would be used to rake any tire tracks when exiting each drill site to the nearest BLM travel route. After raking and natural weather events, tire tracks and other disturbance would likely disappear from view well within 2 years; for context, in 2021, the proponent performed similar drilling and raking procedures as part of a notice-level drilling operation outside the Fremont-Kramer designated ACEC. The disturbance from that prior activity is essentially undetectable, as noted in 2023 by BLM staff (see before-and-after photographs in Appendix B).

All authorized plans of operations are subject to regulatory performance standards 43 CFR 3809.420. Compliance with those performance standards is required for avoiding unnecessary or undue degradation

of public lands and resources, and failure to comply with these requirements is subject to enforcement. See Appendix C for a complete list of these requirements.

Table 2.1. Placer Claims included in Plan of Operation CACA-59184

California Mining Claim	**County**	**Size in Acres**	**Geographic Location by Public Land Survey System** *Township, Range, Section(s)*
CAMC323405	KERN	80	0290S 0400E 023, 026
CAMC323406	KERN	80	0290S 0400E 025
CAMC323407	KERN	80	0290S 0400E 026
CAMC323408	KERN	80	0290S 0400E 023, 026
CAMC323409	KERN	80	0290S 0400E 023, 026
CAMC323410	KERN	80	0290S 0400E 025
CAMC323411	KERN	71	0290S 0400E 025
CAMC323412	KERN	80	0290S 0400E 026
CAMC323413	KERN	80	0290S 0400E 023, 26
CAMC323414	KERN	80	0290S 0400E 023
CAMC323526	SAN BERNARDINO	79	0300S 0410E 029, 030
CAMC323527	SAN BERNARDINO	80	0300S 0410E 029, 021
CAMC323529	SAN BERNARDINO	80	0300S 0410E 028, 029
CAMC323530	SAN BERNARDINO	80	0300S 0410E 018
CAMC323531	SAN BERNARDINO	72	0300S 0410E 020, 029
CAMC323533	SAN BERNARDINO	80	0300S 0410E 20,21,28,29
CAMC323534	KERN	80	0290S 0400E 026
CAMC323535	SAN BERNARDINO	80	0300S 0410E 021, 036
CAMC323537	KERN	54	0290S 0400E 026
CAMC323539	SAN BERNARDINO	53	0300S 0410E 017,018
CAMC323540	SAN BERNARDINO	78	0300S 0410E 021
CAMC323541	SAN BERNARDINO	73	0300S 0410E 020, 021
CAMC323542	SAN BERNARDINO	74	0300S 0410E 021, 022
CAMC323543	SAN BERNARDINO	74	0300S 0410E 018
CAMC323544	SAN BERNARDINO	78	0300S 0410E 017, 018
CAMC323545	SAN BERNARDINO	77	0300S 0410E 018
CAMC323546	SAN BERNARDINO	79	0300S 0410E 017, 018
CAMC323547	KERN	76	0290S 0400E 26, 27, 36
CAMC323549	KERN	78	0290S 0400E 023
CAMC323550	KERN	74	0290S 0400E 025, 036
CAMC323551	KERN	77	0290S 0400E 026, 027
CAMC323552	KERN	79	0290S 0400E 022

2.1.1 Project Design Features

The applicant has committed to implementing the following design features and best management practices (BMPs). Where such measures address DRECP CMA requirements (Section 1.4.1) or regulatory requirements such as 43 CFR 3809.420 (Mining Law of 1872 Performance Standards, copy in Appendix C) or the U.S. Fish and Wildlife Endangered Species Act consultation process (USFWS 2023; see also Section 4.2), those sources are identified in **bold**.

General Practices and Human Health & Safety

- **LUPA-REC-1 and per 43 CFR 3809.420(b)3(i) –** If any existing signs or barriers (such as boulders situated to block unauthorized roads or trails) are disturbed by project operations, these signs and/or barriers would be replaced in original condition by the proponent as soon as the proposed project is no longer actively working within the immediate vicinity.
- **Per 43 CFR 3809.420(b)10 –** The operator would inspect vehicles frequently to prevent accumulation of vegetation or other flammable matter in the undercarriage. All vehicles on site would carry a Class AB fire extinguisher in working order as well as a shovel. The operator would comply with all relevant fire restrictions in effect at the time and place of operation.
- **LUPA-AIR-1 and per 43 CFR 3809.420(b)4 –** All power equipment would employ functioning, certified emission control equipment meeting Original Equipment Manufacturer (OEM) specifications. All OEM-installed spark arrestors, mufflers, or other sound abatement equipment would be maintained in functional condition.

Surface Water and Groundwater

- **LUPA-BIO-9 and per 43 CFR 3809.420(b)5 –** On project sites, vehicles and other equipment will be maintained in proper working condition and only stored in designated containment areas where runoff is collected or controlled and that are located outside of streams, washes, and distributary networks to minimize accidental fluids and hazardous materials spills.
- **LUPA-BIO-9 and per 43 CFR 3809.420(b)5 –** Hazardous material leaks, spills, or releases will be immediately cleaned and equipment will be repaired upon identification. Removal and disposal of spill and related clean-up materials will occur at an approved off-site landfill. Any spills of hazardous fluids would be reported to the Bureau of Land Management Ridgecrest Field Office immediately.
- **LUPA-BIO-9 and per 43 CFR 3809.420(b)5 –** Maintenance and operations vehicles will carry the appropriate equipment and materials to isolate, clean up, and repair any hazardous material leaks, spills, or releases.

General Wildlife and Vegetation

- **LUPA-BIO-7, LUPA-VRM-1 and per 43 CFR 3809.420(b)3 –** Hand tools would be used to rake out any tire tracks resulting from project activities when exiting each drill site.
- **LUPA-BIO-13 –** All burrows would be avoided to the extent feasible.
- **LUPA-BIO-13 and per 43 CFR 3809.420(b)1 –** Previously disturbed areas shall be utilized for parking vehicles. Bushes would be avoided to the extent practical. Minimize natural vegetation removal through implementation of crush and drive or cut or mow vegetation rather than removing entirely.
- **LUPA-BIO-10 and per 43 CFR 3809.420(b)3I, USFWS 2023 –** Weed management practices would be implemented as part of the Proposed Action operations including but not limited to vehicle cleaning, use of weed-free materials, and monitoring. Reclamation shall include continuous refilling of drill holes in an orderly manner, returning the top 2 to 4 inches of topsoil

with the seedbank to the surface of the hole, and raking of tracks as work progresses. If the proposed project is approved, the operation would be reclaimed within 2 years from receipt of final acknowledgement.

- **LUPA-BIO-7 and per 43 CFR 3809.420(a)2 and .420(b)3(ii)A –** The top 2 to 4 inches of topsoil would be salvaged when prepping drilling hole to reclaim the seed bank that is present prior to drilling operations. The salvaged topsoil would be kept separate from any soil brought to the surface. The optimal time for salvaging the seed bank would be June through September to capture seed of winter annuals that dispersed seeds in the spring.
- **LUPA-BIO-13, LUPA-SW-10 and per 43 CFR 3809.420(b)1, USFWS 2023 –** Travel to site locations would utilize WEMO-designated open routes, closed routes that have not yet been restored, and overland travel that avoids vegetation where feasible. The use of closed routes limits the amount of overland travel needed to access each site and would mitigate impacts to vegetation, soils, and damage to cryptogamic soils.
- The operator would limit the number of vehicles that are at each drilling location to only those necessary for operations, and would prevent unnecessary idling of vehicles or equipment to reduce ground vibrations that may disturb fossorial wildlife.
- **LUPA-BIO-14 and per 43 CFR 3809.420(b)7, USFWS 2023 –** The operator would reclaim and close each open drill hole prior to the end of each workday; however, where it is necessary to leave a hole open overnight, the hole shall be covered through the night with a sturdy cover to prevent wildlife from becoming entrapped.
- **LUPA-BIO-7 and per 43 CFR 3809.420(b)3(ii)E –** The operator would salvage any cactus or yucca disturbed by the proposed operation, and replant the salvaged plants in the original location at the conclusion of disturbance at a given site.

Wildlife, Threatened and Endangered, and other Special status Species

- **LUPA-BIO-5 and per 43 CFR 3809.420(b)7, USFWS 2023 –** Prior to beginning work at the project site, all workers engaged in activities for this project would be educated about the desert tortoise, including awareness on its legal status, habitat requirements, activity patterns, and avoidance measures.
- **LUPA-BIO-2**, **LUPA-BIO-IFS-4, LUPA-BIO-IFS-6 and per 43 CFR 3809.420(b)7, USFWS 2023 –** A designated biological monitor (i.e., a person solely to watch for tortoises) would be onsite and actively monitoring during excavations and equipment movement as needed to ensure avoidance and minimization measures are appropriately implemented. The biological monitor would be responsible for ensuring compliance the project-specific Biological Opinion 17B0532-17F1029. All desert tortoise and burrows created by or in use by tortoise or burrowing owl would be avoided.

  If the biological monitor is not onsite during the entire workday, the biological monitor would at minimum be onsite at the beginning and end of each workday, so that the monitor is actively monitoring prior to any mobile equipment travel away from Designated Open routes, during both travel into and out of USFWS-designated Critical Habitat. In this scenario, at the beginning of each workday, the biological monitor would be onsite and actively monitoring as the mobile equipment enters Critical Habitat and would remain onsite until the mobile equipment has moved to its final destination for the day and until a temporary tortoise exclosure fence has been erected around the worksite and been determined to be clear and free of tortoise; at the end of each workday, the biological monitor would be onsite and actively monitoring during the teardown of the temporary exclosure fence and during all equipment movement until the mobile equipment has left the USFWS-designated Critical Habitat.

  At the beginning of each workday, a temporary exclosure of up to 100x100 feet would be constructed around the worksite (using temporary construction netting and metal fenceposts or similar material). The temporary exclosure would be constructed of material at least 22-inches

high with openings no more than 1x2-inches wide, installed such that a 14-inch horizontal skirt of fence material rests on the surface and weighted with native rocks and/or staked along the perimeter to prevent tortoises from entering beneath the fence).
At the completion of project operations, the biological monitor must submit a report to BLM summarizing how the project complied with the USFWS Biological Opinion. If any desert tortoise are injured or killed during project operations, the biological monitor must notify the BLM Ridgecrest Field Office within 12 hours of detection.

- **LUPA-BIO-2 and per 43 CFR 3809.420(b)7, USFWS 2023 –** Only USFWS-authorized and CDFW-authorized biologists may handle or relocate desert tortoises, including any tortoises trapped within temporary fencing (see previous Design Feature). If a desert tortoise is found on-site, all activity that may harm or kill the desert tortoise would cease until the desert tortoise leaves on its own accord.
- **LUPA-BIO-IFS-9 and per 43 CFR 3809.420(b)7, USFWS 2023 –** Vehicle speeds would not exceed 15-mph on BLM routes, and drivers would exercise care to observe and avoid desert tortoise.
- **LUPA-BIO-IFS-8 and per 43 CFR 3809.420(b)7, USFWS 2023 –** Workers shall check under their vehicles and equipment prior to moving/using them. If there is a desert tortoise under a vehicle or under/in equipment, the vehicle/equipment shall not be moved/used until the desert tortoise leaves on its own accord.
- **LUPA-BIO-6 and per 43 CFR 3809.420(b)7, USFWS 2023 –** Subsidized predator standards would be implemented. All trash and food items shall be promptly contained within closed, raven-proof containers or placed out of site in vehicles with closed windows. This also includes "micro-trash", such as screws, washers, small electrical components, etc. Ravens would not be allowed to perch on top of the drilling rig.
- **LUPA-BIO-14 and per 43 CFR 3809.420(b)7, USFWS 2023 –** Feeding of wildlife, leaving of food or trash as an attractive nuisance to wildlife, collection of native plants, or harassing of wildlife on a site is prohibited. Any wildlife encountered during an activity, including construction, operation, and decommissioning would be allowed to leave the area unharmed. Domestic pets are prohibited on sites. All construction materials would be visually checked for the presence of wildlife prior to their movement or use. All drill holes used during the project would be covered, except when being actively used, to prevent entrapment of wildlife.
- **Per 43 CFR 3809.420(b)7, USFWS 2023 –** Operations would comply with required desert tortoise conservation measures specified in the proposed project's Activity Request Form associated with the BLM's 2017 Biological Opinion for Activities in the California Desert Conservation Area (see Appendix D).

Cultural and Paleontological Resources

- **LUPA-CUL-4 and per 43 CFR 3809.420(b)8 –** Proposed ground disturbing activity, including vehicular access and staging areas, within 100 feet of sensitive cultural resources would be monitored by an archaeologist that meets the Secretary of the Interior Professional Qualification Standards. All monitoring would follow the project-specific Archaeological Monitoring Plan (BLM 2023) and comply with the National Historic Preservation Act. See Plan for additional responsibilities and requirements including the definition of the Area of Potential Effects (confidential maps related to cultural resource monitoring would be provided to a qualified archaeologist upon approval of a fieldwork authorization and are exempt under the Freedom of Information Act).
- **LUPA-CUL-4 and per 43 CFR 3809.420(b)8 –** No impacts to significant cultural resources or historic properties are authorized as a result of this permit. An inadvertent discovery is defined as the identification of previously unknown cultural resources within proposed action. Cultural resources can be many different things but include buried artifacts, arrowheads, stone tools, glass

bottles, tin cans, and stone hearths. If an inadvertent discovery is noted within the proposed maintenance project, all work would immediately cease surrounding the discovery and the BLM Archaeologist would be contacted immediately. The Applicant would ensure that the discovery is secured, protected, and held confidential. Work would only be allowed to continue with written approval from the appropriate BLM Field Manager once the level of cultural inventory has been determined and completed.

- **LUPA-CUL-4 and per 43 CFR 3809.420(b)8 –** Any changes to the construction plan that would extend beyond the APE identified during Section 106 NHPA review would require future communication with the BLM to identify any potential effect to cultural resources and Native American values.
- **LUPA-CUL-4 and per 43 CFR 3809.420(b)8 –** In the event of unanticipated impacts to cultural and / or paleontological resources during project implementation, the BLM Field Office Cultural Staff and Field Manager shall be immediately notified by personnel responsible for the project. All work at the site of discovery, and in any other locations where damage to the cultural resource could occur, shall also cease until written approval is provided by the BLM.
- **LUPA-CUL-4 and per 43 CFR 3809.420(b)8 –** If human remains are inadvertently discovered on BLM lands, all activity would immediately cease surrounding the unanticipated discovery. The holder would ensure that the discovery is secured and protected and would immediately notify the BLM Field Manager. The BLM would adhere to current regulations regarding the treatment of human remains.

2.2 No Action Alternative

Under this alternative, the BLM would withhold authorization to operate the proposed project. Current land use in the area would continue. The No Action Alternative is presented as the baseline for the impacts analysis in Chapter 3 (Affected Environment and Environmental Effects).

2.3 Alternatives Considered but Eliminated from Detailed Analysis

NEPA requires analysis of reasonable alternatives consistent with the purpose and need for the proposed action. The Proposed Action (Section 2.1) would implement DRECP CMAs and other such mitigation policies necessary to comply with the performance standards of 43 CFR 3809.420 (see Appendix C), or otherwise to prevent unnecessary or undue degradation (BLM 2016b Section F.5); however, additional mitigation measures may be incorporated into a plan of operations decision even when not required for prevention of unnecessary or undue degradation, with the consent of the operator.

The BLM considered several additional alternatives requiring compliance with mitigation requirements deriving sole authority from Title II of FLPMA (e.g. certain DRECP CMAs); however, these alternatives were but eliminated from detailed analysis because the BLM lacks authority to impose such requirements for actions evaluated under the Mining Law of 1872, except to prevent undue or unnecessary degradation of public lands (43 USC 1732(b)).

3 AFFECTED ENVIRONMENT and ENVIRONMENTAL EFFECTS

This chapter describes the existing conditions relevant to the issues presented in Table 1.2. This chapter also introduces and discusses impacts from the incremental addition of the Proposed Action combined with past, present, and reasonably foreseeable environmental trends and planned actions.

3.1 Issue 1: How would vegetation removal associated with the proposed exploratory drilling impact wildlife habitat (including special status plant and animal species) in the Fremont-Kramer Area of Critical Environmental Concern?

Loss of available habitat is the primary impact-causing elements that could impact general wildlife, migratory birds, and plant and animal special status species including Desert Tortoise. Equipment associated with project activities could deter species from using the surrounding area for habitat. Vegetation removal could also reduce the availability of suitable nesting habitat for migratory birds and limit the amount of foraging habitat for both migratory birds and wildlife. The analysis area consists of the following hydrologic unit code (HUC)-12 watersheds: #180902060601 (39,010 acres), 180902070601 (17,179 acres), and 180902070606 (38,569 acres); totaling 94,758 acres. These watersheds overlap the approximately 14.7-acre proposed project area. The impact indicator for wildlife habitat is acres of vegetation removed.

3.1.1 Affected Environment

The area of this assessment lies in the northern portion of the Mojave Desert, in the easternmost portion of Kern County and the westernmost portion of San Bernardino County, California. Elevation ranges from approximately 2900 to 3600 feet above sea level. The climate is typical of the Mojave Desert, with long and hot summers and cool shorter winters. Rainfall is rarely above 6" per year, with vegetation chiefly dominated by creosote, burro-bush, brittlebush and other woody shrubs.

The Fremont-Kramer Area of Critical Environmental Concern (ACEC) overlaps much of the proposed project area. This ACEC (235,977 acres) encompasses Fremont Valley, the Rand Mountains, Red Mountain, Cuddeback Lake, and extends south beyond Kramer Junction.[3] It was established by the West Mojave Management Plan (WEMO) in March 2006. The purpose of this ACEC is to manage the Fremont-Kramer unit of Critical Desert Tortoise Habitat as designated by the U.S. Fish & Wildlife Service in federal regulation 50 CFR 17.95. The Fremont-Kramer ACEC and desert tortoise Critical Habitat are within the Western Mojave Recovery Unit delineated in the Revised Recovery Plan for the Mojave Population of the Desert Tortoise (USFWS 2011).

This habitat is considered essential to the recovery of the federally listed Desert Tortoise. Critical habitat consists of areas "on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection." The area also encompasses essential movement corridors which link wildlife habitats in the Western Rand Mountains and Fremont Valley to the Cuddeback Lake area and to both the Golden Valley and Grass Valley Wildernesses. The overreaching goal is to manage for tortoise conservation and recovery until such time as the tortoise may be delisted as per criteria given in the Recovery Plan. This includes protection of biological values, including habitat quality, populations of sensitive species, and landscape connectivity while providing for compatible public uses. It also includes maintenance of habitat connectivity for

[3] Reference DRECP Appendix B, page 700 at https://eplanning.blm.gov/public_projects/lup/66459/133476/163156/West_Desert_and_Eastern_Slopes_Subregion_AppB.pdf

wildlife with movement corridors in all directions to prevent habitat fragmentation. United States Highway 395 goes through and/or borders this ACEC. A portion of the drilling project is outside the boundaries of the Fremont-Kramer ACEC, but still within the critical habitat designated by the USFWS (see Appendix A, below).

The Management Actions and Objectives for this ACEC call for analyzing new proposals on a case-by-case basis cumulatively to assess whether they are compatible with ACEC and its management goals. The ACEC management also calls for including stipulations to protect the desert tortoise (BLM 2016a).

3.1.1.1 Wildlife

General Wildlife

BLM biologists reviewed existing information on biological resources in the project area, including baseline data sources for the survey area, such as U.S. Geological Survey (USGS) topographic maps, internal BLM geographic information systems (GIS), USFWS Information for Planning and Consultation (IpaC)(USFWS 2022b), USGS Desert Tortoise Habitat Model (USGS 2009), California Special Plant and Animal Lists (CDFW 2023), and a records search of the California Department of Fish and Game (CDFG) California Natural Diversity Data Base (CNDDB) (January 2023). The 2019 BLM Sensitive Species List was also consulted, which lists special status animals in California, including BLM designated sensitive species.

In 2021, biologists working for a consulting firm, South Environmental, conducted protocol-level presence/absence desert tortoise surveys within the proposed project area according to USFWS protocols (USFWS 2017). The observations noted during this survey (South Environmental 2021) are summarized in the section on Mojave Desert Tortoise, below.

Migratory Bird Treaty Act; Bald and Golden Eagle Protection Act

Several birds are protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). If migratory birds and/or their nests are inhabiting or temporarily occupying the proposed project area, they are protected by the MBTA. It is possible that migratory birds could utilize the proposed project area for forage, resting, or finding refuge. Ground nesting birds could use this area during the nesting season. Bald and golden eagles are protected under both acts, although records do not indicate a presence of these species in the proposed project area (CNDDB 2023).

Special Status Wildlife Species

This section of special status species evaluated in this EA consists of all federally protected species (threatened and endangered), and species listed as candidate, proposed, or under review. State listed species and other designated sensitive species will be reviewed in the BLM Sensitive Wildlife Species section of this EA.

The USFW Environmental Conservation Online System Information for Planning and Consultation (ECOS-Ipac) website (USFWS 2022b) was reviewed. This review identified 2 threatened, endangered, or candidate wildlife species that could potentially utilize proposed project area, the Mojave desert tortoise and the Monarch butterfly.

Mojave Desert Tortoise (*Gopherus agassizii*), a federally threatened species. Desert tortoise primarily inhabit creosote bush scrub and Joshua tree woodland communities in the Mojave Desert, with the typical habitat at elevations below 5,500 feet. The desert tortoise lives in habitats typically consisting of alluvial fans and plains and colluvial/bedrock slopes, including washes, and canyons, where suitable, friable soils for den construction may be found. Preferred habitat has vegetation alliances of creosote bush (*Larrea*

tridentata) or, less commonly, blackbrush (*Coleogyne ramosissima*), Joshua tree (*Yucca brevifolia*), and even juniper (*Juniperus* sp.) at higher elevations and saltbush (*Atriplex* sp.) at lower elevations (USGS 2009). This species spends much of its life underground in burrows. In late winter or early spring, they emerge from their wintering dens, and in a typical year will remain active through the fall season. During summer months, activity slows, but they will emerge from their burrows to take advantage of summer rains to drink available surface water. The breeding season occurs during summer, spring and fall with reproductive success being dependent on a variety of factors including environment, habitat, availability of forage and drinking water, and physiological condition. This species requires 13 to 20 years to reach sexual maturity, has low reproductive rates during a long period of reproductive potential. Females can lay 0-3 clutches of eggs per season which may consist of 1-10 eggs. Although the success of a clutch is difficult to quantify, clutch failure appears to be influenced by predation. Desert tortoise home ranges varies according to location and temporal environmental conditions; however, it has been documented that males can have a long-term home range of up to 200 acres, with female home range being half the size of males. However, core areas used by desert tortoises over their lifetimes can be up to 1.5 square miles with periodic roaming up to 7 miles (USFWS 2011, USFWS 2023).

In 2021, South Environmental consultants conducted protocol-level presence/absence desert tortoise surveys for the area according to USFWS 2017 Preparing for Any Action That May Occur Within the Range of the Mohave Desert Tortoise *(Gopherus agassizii)*. This survey found the following:

- one observation of a live female desert tortoise outside of her burrow near the northern-most drill site north of Johannesburg;
- two burrows (one with tracks), and recent tortoise scat near the southern-most drill site survey; .
- one recent tortoise scat was observed in the survey area west of US 395, north of Atolia;
- no tortoise sign was observed in the survey area southeast of Atolia (South Environmental 2021).

The proposed project area is within the Western Mojave Recovery Unit, the Fremont-Kramer ACEC and designated critical habitat for this species. In 2020, 50 transect surveys of the Fremont-Kramer ACEC resulted in 18 desert tortoises observed at the stratum-level (USFWS 2020). Interpretation of the 2020 data resulted in an estimated density of 1.7 adult tortoises/km^2, lowest out of all six strata surveyed that year (USFWS 2022d). The minimum viable density for this species is estimated to be 3.9/km^2 (USFWS 2022c).

Monarch Butterfly (*Danaus plexippus*), a federal candidate species. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.), and larvae emerge after two to five days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately two to five weeks; overwintering adults enter reproductive diapause (suspended reproduction) and live six to nine months. In many regions where monarchs are present, they breed throughout the year. In the fall Monarchs begin migrating to overwintering sites which can consist of distances of over 1,800 miles and can last for over 2 months. In spring (February to March), the surviving individuals break diapause, mate at the overwintering site and disperse. This species does not have designated critical habitat, as it is a candidate species. Three overwintering populations of monarchs have been documented in canyons approximately 100 miles north in Saline Valley. No monarch butterfly observations were recorded in the proposed project area (CNDDB 2023).

Table 3.1. Federally protected species considered for the proposed project area

Common Name (*scientific name*)	Status	Potential for Occurrence in Proposed Project Area
Reptiles		
Desert tortoise *(Gopherus agassizii*)	Threatened	Known to occur in the general area of the project. The project site is located within USFWS designated critical habitat for the desert tortoise
Insects		
Monarch butterfly (Danaus plexippus)	Candidate	Unlikely to occur but may occur in the surrounding area.

The proposed project area is not located within critical habitat for any federally listed plant species and no federally listed plant species has been observed in this area (USFWS 2023).

The United States Department of the Interior Bureau of Land Management Special Status Species Management Manual 6840 provides policy and guidance for the conservation of BLM designated special status species and their ecosystems upon which they depend on BLM administered lands. This includes special status species listed or proposed for listing under the Endangered Species Act (ESA), such as the desert tortoise and the monarch butterfly. It also includes sensitive species that require special management considerations to promote their conservation and reduce the likelihood and need for future listing under the ESA, such as California state listed species and Species of Special Concern.

BLM Sensitive Wildlife Species

There are several BLM Sensitive Wildlife Species that may occur or are known to occur within the proposed project area (Table 3.2).

Mohave Ground Squirrel (*Xerospermophilus mohavensis*), a California state threatened species. Its range is only within the western portion of the Mojave Desert in parts of Inyo, Kern, Los Angeles, and San Bernardino counties. This species prefers open desert scrub, alkali desert scrub, Joshua tree, and annual grasslands with sandy to gravelly soils, and uses burrows at the base of shrubs for cover. It is a diurnal species that is active primarily in the early spring and summer and stays underground in burrows during the remaining parts of the year. Mohave ground squirrels are medium-sized (about 9 inches long) with a grayish-brown upper body and creamy white ventral surface. Thermoregulation is facilitated by dorsal hair tips that are multi-banded on darkly colored skin. It has large eyes that are set high on the head, and smaller ears than other ground squirrel species in California. Mohave ground squirrel feed on leaves and stems of shrubs, such as winterfat (*Krascheninnikovia lanata*), spiny hopsage (*Grayia spinosa*) and saltbush (*Atriplex spp.),* and leaves of forbs, such as the freckled milkvetch (*Astragalus lentiginosus*). Females reproduce in all age classes, while the males do not mate until they are at least 2 years old. Mating occurs after emerging from hibernation and typically lasts from February to mid-March. Litter size is between four to nine pups. The amounts of fall and winter rainfall influences reproductive success, as it is related to the availability of plant food sources (CDFW 2019).

A review of the CNDDB records show one observation of Mohave ground squirrel within 1 mile of the proposed project area, however the 4 drilling sites are within the Mohave ground squirrel linkage areas and the northern-most drill site is adjacent to the southern border of the Fremont Valley/Spangler core population area (CNDDB 2023, CDFW 2019).

Table 3.2. BLM Sensitive Wildlife Species with potential to occur in the proposed project area.

Common Name	*Scientific Name*	Federal Status	State Status	BLM Sensitive	Other Status	Unlikely to Occur	May Occur	Known to Occur	Comments
Mammals									
Long-eared myotis	*Myotis evotis*			X			X		
Mohave ground squirrel	*Spermophilus mohavensis*		ST	X				X	Approximately 1 mile from PPA (CNDDB 2023)
Pallid bat	*Antrozous pallidus*			X	SSC			X	1 mile from PPA (CNDDB 2023)
Small-footed myotis	*Myotis ciliolabrum*			X		X			
Spotted bat	*Euderma maculatum*			X	SSC	X			
Townsend's big-eared bat	*Corynorhinus townsendii*			X	SSC			X	Approximately 1 mile from PPA (CNDDB 2023)
Western mastiff-bat	*Eumops perotis*			X	SSC		X		
Yellow-eared pocket mouse	*Perognathus xanthonotus*			X		X			
Yuma myotis	*Myotis yumanensis*			X			X		
Birds									
Burrowing owl	*Athene cunicularia*			X	SSC		X		
Reptiles									
Coast horned lizard	*Phrynosoma blainvillii*			X			X		
Desert tortoise	*Gopherus agassizii*	FT	ST					X	10/8/2021 Live tortoise and sign within PPA (South Environmental 2021)

Federal Status: FE = Federally Endangered, FT = Federally Threatened, FC = Federal Candidate, FP = Proposed for Federal Listing, FD = Delisted from Federal ESA; State Status: SE = State Endangered, ST =State Threatened, SC = State Candidate, SR=State Rare, SD = Delisted from State ESA; Other Status: EA = Bald and Golden Eagle Protection Act, SF = Fully Protected, SSC = Species of Special Concern, CC=Candidate
PPA=Proposed Project Area

3.1.1.2 Plants

Two natural vegetation communities were recorded within the proposed project area, following California Native Plant Society (CNPS) guidelines: Creosote-White Burrobush (*Larrea tridentata – Ambrosia 20rojec*) Shrubland Alliance and Allscale (*Atriplex polycarpa*) Shrubland Alliance.

***Larrea tridentata — Ambrosia 20rojec* (Creosote-White Burrobush) Shrubland Alliance**

This xerophytic shrubland community is the dominant vegetation alliance of the Mojave Desert. The Creosote-White Burrobush Shrubland Alliance occurs most often on gentle to moderately sloped alluvial fans, bajadas, and hills in well-drained, sandy soils that are oftentimes calcareous with a caliche hardpan and/or desert pavement surface (CNPS 2021a). The shrub layer is open and co-dominated by creosote and white burrobush.

Other shrubs and sub-shrubs are common and may co-dominate, these may include rayless goldenhead (*Acamptopappus sphaerocephalus*), saltbush (*Atriplex spp*.), ephedra (*Ephedra spp.*), cheesebush

(*Ambrosia 21roject*), rhatany (*Krameria spp*.), Anderson thornbush (*Lycium andersonii*), indigobush (*Psorothamnus spp*.), bladder-sage (*Scutellaria 21roject21*), desert senna (*Senna armata*), and many others (CNPS 2021a).

Creosote-White Burrobush Shrubland Alliance is the most common vegetation community in the Project Area. (This community occupies a variety of soil types in the Project Area including sandy, well-drained soils, granitic derived soils, and washes with a mixture of sand and gravel. Though relative abundance of both creosote and white burrobush varies throughout the site, both species are ubiquitous and can be found everywhere the community exists. Throughout the site, several additional shrubs commonly co-occur including cheesebush (*Ambrosia 21roject*), rayless goldenhead (*Acamptopappus sphaerocephalus*), Cooper's goldenbush (*Ericameria cooperi*), Johnson's indigobush (*Psorothamnus arborescens var. minutifolius*) and Mojave cottonthorn (*Tetradymia stenolepis*). Beavertail (*Opuntia basilaris*) and silver cholla (*Cylindropuntia echinocarpa*) are also common in this alliance.

The herbaceous layer consists of perennial and annual forbs and grasses, commonly including desert fiddleneck (*Amsinckia 21roject21te*), pebble pincushion (*Chaenactis carphoclinia*), Nevada cryptantha (*Cryptantha nevadensis var. nevadensis*), brittle spineflower (*Chorizanthe brevicornu*), devil's spineflower (*Chorizanthe rigida*), pygmy poppy (*Eschscholzia minutiflora*), wild buckwheat (*Eriogonum trichopes*), Thurber's spineflower (*Centrostegia thurberi*), red brome (*Bromus madritensis ssp. rubens*), cheatgrass *(Bromus tectorum*), and Arabian grass (*Schismus sp*.).

In small washlets within the Creosote-White Burrobush Shrubland Alliance, the following sub-shrubs and perennial herbs are relatively common: broom snakeweed (*Gutierrezia sarothrae*), spiny senna (*Senna armata*), rubber rabbitbrush (*Ericameria nauseosa var. hololeuca*), wire lettuce (*Stephanomeria pauciflora*), and desert dandelion (*Malacothrix glabrata*).

***Atriplex polycarpa* (Allscale) Shrubland Alliance**

The Allscale Shrubland Alliance is another common alliance of the Mojave Desert and is typically found in valley bottoms, basins, playas, and bajadas on moderately saline soils (CNPS 2021a, USNVC 2021).

The shrub layer is open to somewhat dense and dominated or co-dominated by cattle saltbush. Other common shrubs include creosote (*Larrea tridentata*), white burrobush (*Ambrosia 21rojec*), and cheesebush (*Ambrosia 21roject*). The herbaceous layer is usually sparse and dominated by perennial or annual grasses (USNVC 2021).

This vegetation alliance is found in the Atolia East portion of the Project Area, at the far western corner. This community occurs on alkaline soils, on a slight incline above and adjacent to a drainage area. White burrobush, creosote and cheesebush are also present. Forbs and annual grasses have low cover within this alliance; these include devil's spineflower, red stem stork's bill (*Erodium cicutarium*), red brome, Mediterranean grass, and others.

Botanical surveys in the spring of 2021 were conducted by Phoenix Biological Consulting in compliance with California Bureau of Land Management Survey Protocols Required for NEPA/ESA Compliance for BLM *Special Status Plant Species and Integrated Vegetation Protocols for Pre-Project Surveys.* Approximately 174 acres were surveyed for the proposed project. The list of special status plant species with potential to occur in the project area (Table 3.3) were compiled from the California Natural Diversity Database (CNDDB) and BLM Biological Specialist input

Table 3.3. BLM Sensitive Plant Species with potential to occur in the proposed project area.

Common Name	*Scientific Name*	Federal Status	State Status	BLM Sensitive	CA Rare Plant Rank	Unlikely to Occur	May Occur	Known to Occur	Bloom Period	Comments
White Pygmy Poppy	*Canbya candida*				4.2	X			March — June	
Prickly (Clokey's) Cryptantha	*Cryptantha clokeyi*			X	1B.2		X		April	
Desert Cymopterus	*Cymopterus deserticola*			X	1B.2	X			March — May	
Barstow Woolly Sunflower	*Eriophyllum mohavense*			X	1B.2	X			April — May	
Red Rock Canyon Monkeyflower	*Erythranthe rhodopetra*			X	1B.1		X		March — May	
Red Rock Poppy	*Eschscholzia minutiflora ssp. twisselmannii*			X	1B.2		X		March — May	Species level positively identified in survey

Federal Status: FE = Federally Endangered, FT = Federally Threatened, FC = Federal Candidate, FP = Proposed for Federal Listing, FD = Delisted from Federal ESA; State Status: SE = State Endangered, ST =State Threatened, SC = State Candidate, SR=State Rare, SD = Delisted from State ESA; Other Status: EA = Bald and Golden Eagle Protection Act, SF = Fully Protected, SSC = Species of Special Concern, CC=Candidate
PPA=Proposed Project Area

White pygmy poppy (*Canbya candida*)

White pygmy poppy habitat is described as sandy, gravelly, and granitic areas in Joshua tree woodland, pinyon juniper woodland, and Mojave desert scrub (CNPS 2021b). Since there are several washes within the Project Area, and records of this plant to the south, southwest, and west of the Project Area within Mojave desert scrub, the potential to occur is low-medium.

Clokey's cryptantha (*Cryptantha clokeyi*)

Clokey's cryptantha occurs in Mojave desert scrub, on rocky to gravelly slopes and ridge crests (CNPS 2021b, Baldwin et al. 2002). The elevation range reported for this taxon is 1050-1650 m (3444-5413 ft). As the lower elevation range falls within the Project Area elevation (3000 to 3800 ft), and both habitat and vegetation type are found within the Project Area, the potential to occur is low-medium.

Desert cymopterus (*Cymopterus deserticola*)

Desert cymopterus occurs in sandy desert in Mojave desert scrub and Joshua tree woodland (CNPS 2021b). A perennial plant, desert cymopterus would potentially produce aboveground vegetation (leaves, flowers) even in conditions observed during spring 2021. Additionally, the dissected leaves make this a distinctive plant, even in dried form. As no sandy desert occurs in the Project Area, and no living or dead plants were seen, the potential to occur is low.

Barstow woolly sunflower (*Eriophyllum mohavense*)

Barstow woolly sunflower occurs in chenopod scrub, Mojave desert scrub, and playa communities. Collections mainly centered around Boron and Barstow (Calflora 2021). Although Mojave desert scrub is found in the Project Area, the Project Area is further north than any documented occurrences for this taxon and higher in elevation than the reported elevation range for this species (1640—2624 ft) (Baldwin et al. 2002). The potential for this species to occur in the Project Area is low.

Red Rock Canyon monkeyflower (*Erythranthe rhodopetra*)

Red Rock Canyon monkeyflower is only known from the El Paso Mountains (CNPS2021b). Collections of this species mainly come from Red Rock Canyon State Park, located to the northwest of the Project Area. It is described as occurring in "highly compacted sandy soils in washes derived from sedimentary rock of the Ricardo Formation" (Fraga 2012). Although this species is highly edaphic specific, sandy washes were identified during the survey efforts. Therefore, the potential for this species to occur in the Project Area is low-medium.

Red Rock poppy (*Eschscholzia minutiflora ssp. twisselmannii*)

Red Rock poppy is known from Kern and San Bernardino counties in California, and is listed as sensitive by the BLM, although it has no state or federal listing status (Calflora 2021, CNDDB 2021). A diploid, Red Rock poppy differs from other subspecies by having larger (10-26mm) petals (Baldwin et al. 2002). Known only from the Rand and El Paso mountains, this taxon is typically found in Mojave desert scrub. It is associated with volcanic tuff but can also be found in sandy washes (Calflora 2021, CNPS 2021b).

Although no volcanic tuff was encountered within the Project Area, the potential to occur is high, due to the proximity of nearby collections and observations from both the Rand and El Paso Mountains, as well as the presence of washes (Calflora 2021).

3.1.2 Environmental Impacts

3.1.2.1 Wildlife

Alternative A: Proposed Action

The proposed action includes no blading of access roads but would access the site using a combination of WEMO designated routes plus undesignated existing trail features. The proposed action would also refill all drill holes, and hand-rake all tire tracks on such trails upon the exit from each site. Conservation Management Actions for the proposed project are listed in Section 1.4.1.

General Wildlife

The proposed action would have short term impacts on up to approximately 14.7 acres of vegetation that would otherwise be available for wildlife habitat for the duration of the proposed project. These impacts consist of approximately 14.7 acres of tire tracks on both closed routes and overland travel to the drill hole sites, as well as 337 square feet of temporary disturbance directly resulting from the drill holes; these disturbances are anticipated to fade completely from detection within two years following reclamation at the end of the proposed project.

The proposed action may cause impacts to wildlife, including fossorial species, during the implementation of the proposed drilling project.

Direct impacts may include injury or mortality due to equipment or movement of vehicles, and avoidance of the area by wildlife due to noise and vibrational disturbances from equipment and vehicles. Each drill site is expected to be occupied by a limited number of vehicles and equipment for approximately one day each, so these impacts will be short lived.

Indirect impacts may include loss of seed bank and reduction of vegetative reproduction within the drill hole disturbance, however the salvaging of the top few inches of topsoil as described in the project design features would preserve the seed bank and limit the impact to germination in the following seasons.

Implementation of project design features would be expected to mitigate impacts to general wildlife species.

Migratory and Special Status Bird Species

The MBTA provides federal protection to all migratory birds, their nests, and their eggs. Up to approximately 14.7 acres of potential nesting habitat would be impacted by the project, however these impacts are expected to fade within 2 years. Vegetation will be avoided where feasible, no creosote bushes will be removed, and no trees will be removed because of the project. Disturbances from noise and vibrations from the drilling equipment may deter migratory birds from using the area temporarily.

Bald and golden eagles are unlikely to inhabit the project area. Bald and golden eagle observations have not been recorded for the proposed project area (CNDDB 2023). Up to 14.7 acres of potential foraging habitat would have short term impacts from the proposed project consisting of tire tracks and reclaimed drillholes that are expected to fade within 2 years. Suitable nesting habitat is not present in or near the project area.

Special Status Wildlife Species

Special status species that may be present or are known to be present in the proposed project area have been evaluated for possible impacts from the proposed project and are discussed in a later section. One federally listed Threatened species and one State listed Threatened species have been observed within the proposed project area and may be present when and if implementation occurs.

Special status species unlikely to be present in the proposed project area have not been analyzed further.

Mojave Desert Tortoise (Gopherus agassizii), a federally threatened species.

This proposed project area contains habitat that is associated with desert tortoise, including creosote brush scrub. It is also within desert tortoise critical habitat and three of the four drill locations are within the Fremont-Kramer ACEC. This species was observed during the 2021 South Environmental biological survey. One female adult desert tortoise, two tortoise burrows, and scat were recorded within the project area. Avoidance of desert tortoise and burrows is required if encountered by Gold Discovery Group staff, as stated in the conservation management actions listed in the USFWS response to the Activity Form for the Biological Opinion 17B0532-17F1029 (Appendix D).

Direct impacts may consist of injury or mortality due to equipment of movement of vehicle to or between drill sites. However, the compliance with the USFWS Biological Opinion 17B0532-17F1029, including avoiding burrows, worker education, and subsidized predator prevention would reduce the likelihood of injury or mortality to desert tortoise occurring. Impacts would likely be to individuals of the species, not impacting the population, and would occur during the operation period of the project. The limited number of vehicles and equipment, and the short amount of time spent working at each drill hole will also limit direct impacts.

Indirect impacts include loss of up to 337 square feet of seed bank due to drilling and a loss of vegetation growth in those areas, however this impact will be mitigated by salvaging the top 2 to 4 inches of soil at each drill hole prior to drilling and replacing the stockpiled soil on top after the hole has been filled after drilling.

The proposed project could impact individuals but would not likely contribute to a trend toward federal listing or cause a loss of viability to the population or species.

State Listed Species

Mohave Ground Squirrel *(Xerospermophilus mohavensis)*, a California state threatened species

The proposed project area contains habitat that is associated with Mohave ground squirrel, including open desert scrub and sandy and gravelly soils. Direct impacts may consist of injury or mortality due to equipment of movement of vehicle to or between drill sites. Burrows may be crushed or weakened due to vehicle movement or vibrations from the drill rig. The avoidance of burrows, as outlined in the project design features, would reduce these direct impacts.

Indirect impacts include loss of vegetation due to drilling and tracks from vehicles. Up to approximately 337 square feet of seed bank would be lost due to drilling, however the salvaging and replacement of the top 2 to 4 inches of soil at each drill hole would mitigate this impact. The use of trans linear features, such as open and closed routes, and limited cross country travel will reduce the amount of vegetation impacted. Brush would be avoided where feasible when traveling cross country.

Some mitigation measures that are specific to Mojave desert tortoise would also reduce impacts to the Mohave ground squirrel. However, this state listed species is under the purview of California Department of Fish and Wildlife. To remain in compliance with state laws, the proponent would contact CDFW and follow recommendations set forth by that state agency.

USFWS response # 2023-0029507-S7-001 (January 3, 2023) concludes that this project is appropriate for use under the prevailing biological opinion. The same response provides there should be a post-project report sent to the Palm Springs Fish & Wildlife Office and the Bureau Biologist with 30 days of project completion, or by January 31 of each year with an estimated date of project completion. See Appendix D, below.

The required mitigation measures (Appendix D) and project design features (Section 2.1.1) would mitigate potential impacts to the resource values the Fremont-Kramer ACEC was established to protect, including the Mojave desert tortoise and its Critical Habitat as designated by the USFWS. This area also encompasses essential movement corridors which link wildlife habitat in the Western Rand Mountains and Fremont Valley to the Cuddeback Lake area and to both the Golden Valley and Grass Valley Wildernesses. The implementation of several Conservation Management Actions, such as avoiding burrows and vegetation, replacing seed bank when refilling drill holes, and subsidized predator prevention would reduce impacts to being short term in nature.

Alternative B: No Action Alternative

Under the No Action Alternative BLM would take no action to approve the proposed action. That is, no activities above the level of casual use would be allowed and the claimant would be denied access to sample placer deposits at depth.

3.1.2.2 Plants

Alternative A: Proposed Action

The mining claims associated with this proposal, and other additional claims were surveyed by a biological consultant in compliance with **LUPA-BIO-PLANT-1.**

A BLM sensitive species (CA 1B.2), the Red Rock Poppy, *Eschscholzia minutiflora ssp. twisselmannii*, is known to occur near the project area. During the 2021 surveys, *Eschscholzia minutiflora* was positively identified in three mining claims (the Tux 4, 18, and 20 placer claims) however, due to poor precipitation and survey timing, the plant was not able to be confirmed at a subspecies level. The mining claims containing *Eschscholzia minutiflora* are less than a mile from the proposed drilling sites, but no direct impacts to this species are expected because the proposed project would utilize existing trans-linear features and would not blade or create new roads. The proposed project would therefore avoid all known occurrences of special status plant species.

All vegetation would be avoided to the extent possible during any off-road travel. The drive-and-crush technique described in Section 2.1 would be expected to temporarily reduce general vegetative cover; however, many plants will resprout and resume growth after being driven over. The vegetation within the proposed project area would be expected to fully recover within two years of being impacted, as the BLM has observed after a similar drilling project was completed nearby (see before-and-after photographs in Appendix B).

Alternative B: No Action Alternative

Under the No Action Alternative BLM would take no action to approve the proposed action. No activities above the level of casual use would be allowed and the claimant would be denied access for any drill rig to sample placer deposits.

3.1.3 Mitigation Measures and Residual Impacts

The Proposed Action would remove vegetation available for wildlife habitat on up to 14.7 acres for the life of the project, which represents approximately <1% of available wildlife habitat within the analysis area. The Proposed Action, together with past, present, and reasonably foreseeable actions, would incrementally contribute to the density of development and overall habitat fragmentation in the analysis area. However, the reduction (<1%) of available habitat resulting from the Proposed Action (vegetation clearing at the excavation site) would not be significant when compared with the amount of available similar habitat.

Project design features (detailed in Section 2.1.1) have been established to reduce impacts to natural resources. Noise during operation could result in temporary impacts. Cumulative impacts to wildlife populations are expected to be negligible.

It is expected that the project area would become indistinguishable from surrounding lands within two years of the end of operations.

3.2 Issue 2: How would the proposed action affect cultural resources, including Native American and/or religious concerns, as well as paleontological resources?

3.2.1 Affected Environment

The area of the proposed action includes ancestral homelands of Nuwa (Kawaiisu), Serrano, and other indigenous peoples of the western Mojave Desert. Industrial mining for gold, silver, tungsten, and other precious commodities began in the late 1800s and continues to this date.

Geological units within the proposed project area consist of surficial alluvium and igneous and metamorphic rocks unassociated with any geologic formations known to produce scientifically significant paleontological resources.

3.2.2 Environmental Impacts

Alternative A: Proposed Action

A review of BLM cultural program records was conducted by BLM Cultural Resource Program Staff. It was determined that the proposed project was previously surveyed (BLM Cultural Resource Inventory Report # CA-650-2023-03, CA-650-2022-15, CA-650-2022-29) to the level of a Class III inventory in accordance with Protocol Stipulation 5.4. These inventories meet current BLM standards for the identification of cultural resources. Project design features described in the proposed action, including the Archaeological Monitoring Plan (BLM 2023), would ensure that impacts to cultural resources are avoided.

As a result, NHPA review resulted in a preliminary finding of no effects to historic properties for the proposed action and alternatives. NHPA review will be finalized following the completion of Tribal consultation and coordination.

Due to a lack of known fossil-bearing sedimentary geological units within the proposed project area, the proposed project would not be expected to impact paleontological resources. However, in the event of an inadvertent discovery, the Project Design Features (Section 2.1.1) would be expected to mitigate potential impacts.

Alternative B: No Action Alternative

Under the No Action Alternative BLM would take no action to approve the proposed action. That is, no activities above the level of casual use would be allowed and the claimant would be denied access to sample placer deposits at depth.

3.2.3 Mitigation Measures and Residual Impacts

The Proposed Action would not be expected to impact any cultural or paleontological resources. Potential impacts to unexpected discoveries would be mitigated through the Inadvertent Discovery measures and other such measures described in the Project Design Features (Section 2.1.1). Therefore, no direct or indirect impacts to heritage values nor paleontological resources have been identified for the proposed action.

4 PUBLIC INVOLVEMENT, CONSULTATION, and COORDINATION

4.1 Public Involvement

The BLM RIFO engaged the general public by posting this EA on the BLM's ePlanning webpage at https://eplanning.blm.gov/ for a 30-day public comment period beginning February 24, 2023. For the purposes of public notification and review, as required under Section 106 of the NHPA, a description of this project was posted on ePlanning on February 9, 2023. The posted project description includes a statement that indicated that this action would result in no effect to historic properties as defined in the 2019 State Protocol. As required under the Protocol, this determination will be posted for a minimum of 30 days prior to an agency decision. No additional public involvement measures were initiated for the proposed project.

4.2 Endangered Species Act Consultation

The BLM submitted an Activity Request Form from the BLM's 2017 Biological Opinion for Activities in the California Desert Conservation Area, with tortoise conservation measures and reporting requirements. The Palm Springs Field Office of the USFWS concurred January 3, 2023 that the project is covered by this BO (reference Appendix D).

4.3 Tribal Consultation

Tribal notification was initiated for the proposed action (TNL # RIFO-23-02) in January of 2023. During this process, a general description of the proposed action along with relevant maps was mailed by USPS Certified Mail to federally and non-federally recognized Native American Tribes and individuals. No contacted Tribes or individuals indicated that places of importance or tribal values, including access, would be impacted by the proposed action. In the event that future monitoring identifies potential impacts to cultural resources as a result of the proposed action, additional consultation would be initiated under NHPA and other regulatory authorities.

The certified letter was mailed to the following Tribal Leaders and emailed to contacts noted with an asterisk (*):

- Honorable Robert Robinson, Chairman, Kern Valley Indian Community
- Honorable Octavio Escobedo, Chairman, Tejon Indian Tribe
- Colin Rambo, Cultural Resources Management Technician, Tejon Indian Tribe*
- Honorable Lynn Valbuena Chairwoman, San Manuel Band of Mission Indians
- Lee Clauss, Tribal Historic Preservation Officer, San Manuel Band of Mission Indians*

5 LIST OF PREPARERS

This EA has been prepared by BLM staff. The table below contains a list of individuals that contributed to or reviewed this EA.

List of EA Preparers

Name	Area of Expertise	Organization
Randall Porter	Geologist; Project Lead	BLM RIFO
Amy Girado	Archaeologist, Paleontology Lead	BLM RIFO
Emma Lynch	Natural Resource Specialist	BLM RIFO
LaReina Van Sant	Wildlife Biologist	BLM RIFO
Max Wiegmann	Planning and Environmental Coordinator	BLM RIFO

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7 LIST OF APPENDICES

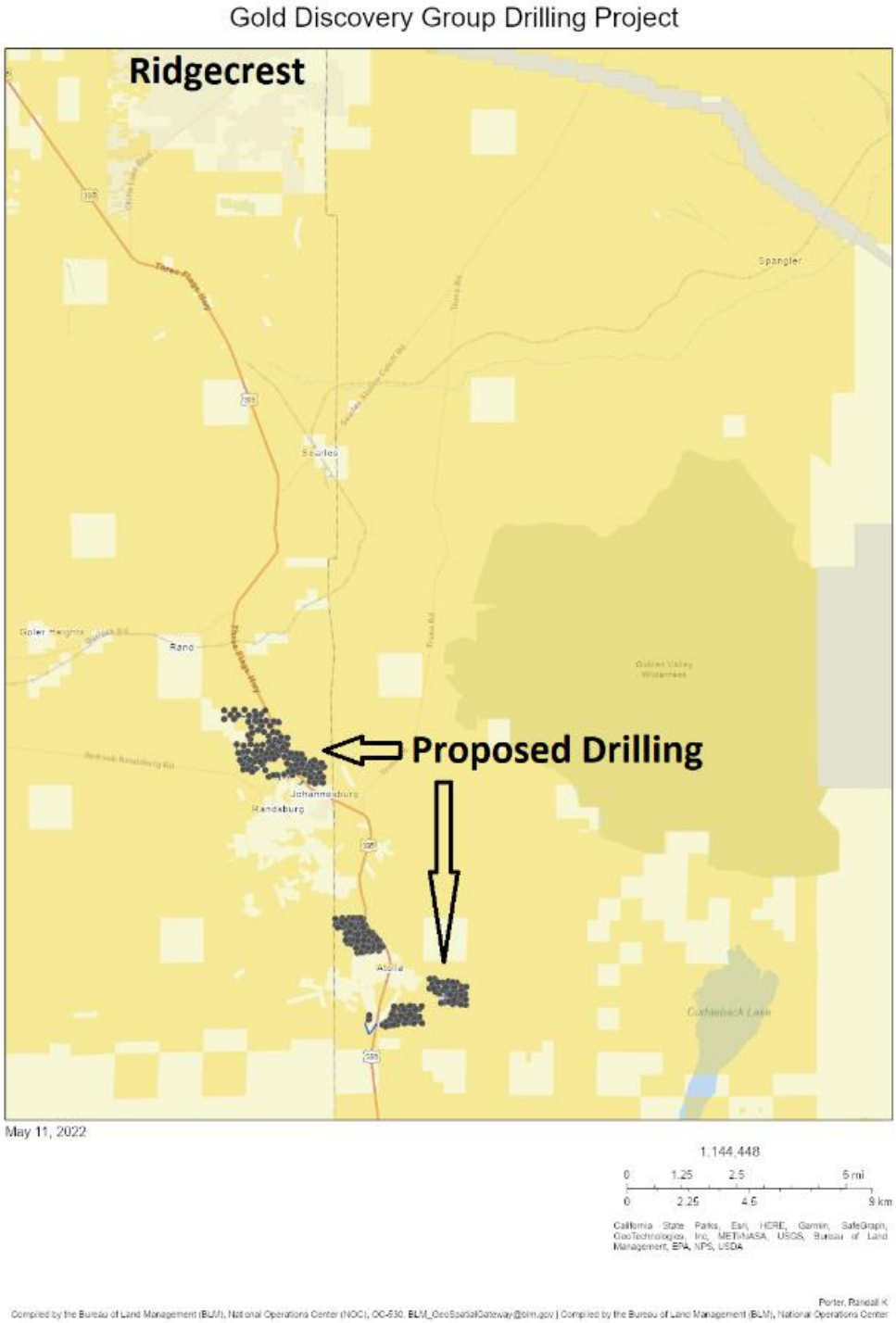
Appendix A Maps and Figures

Appendix B Project Photographs

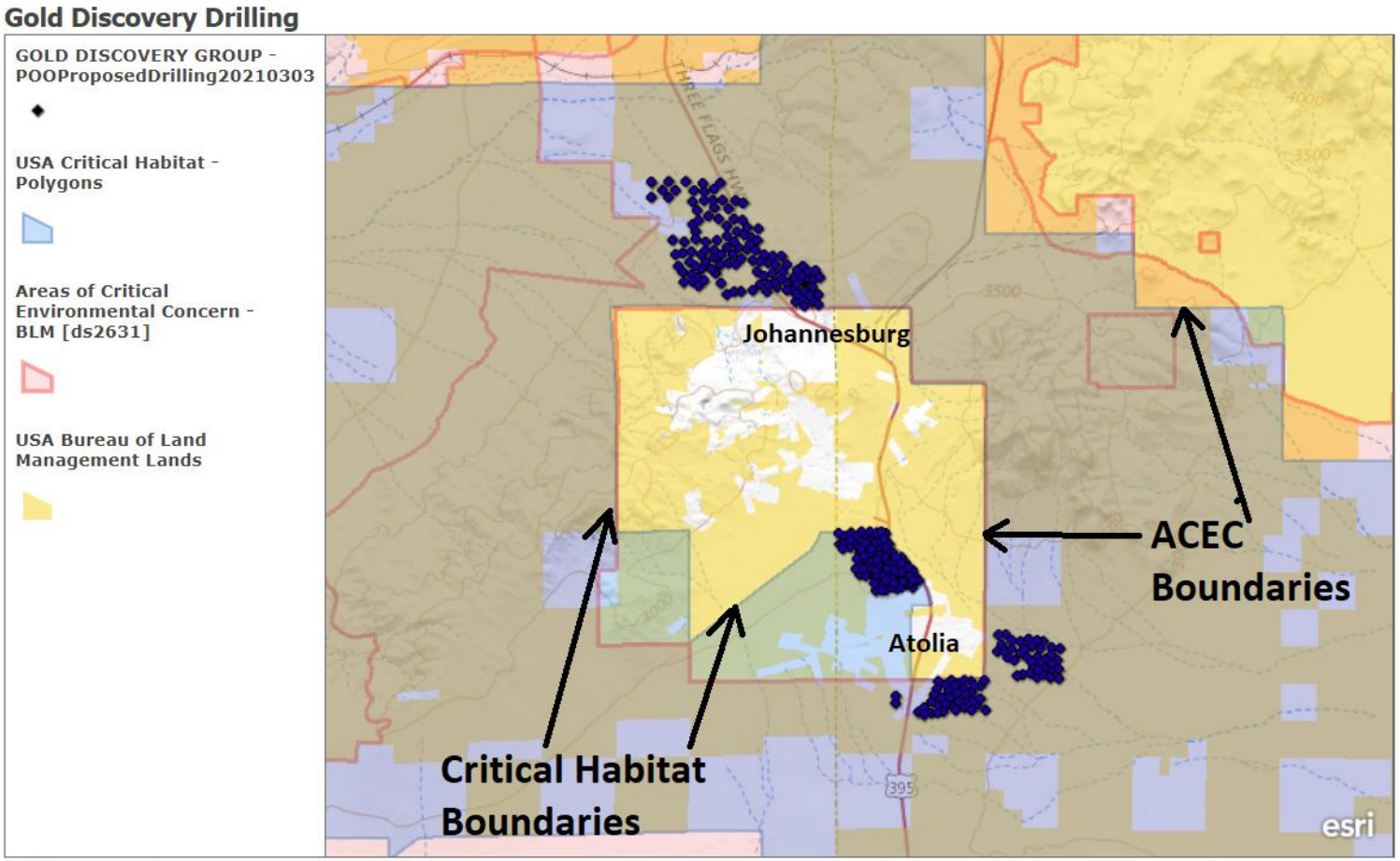
Appendix C: Required Performance Standards

Appendix D: Measures Authorized by USFWS

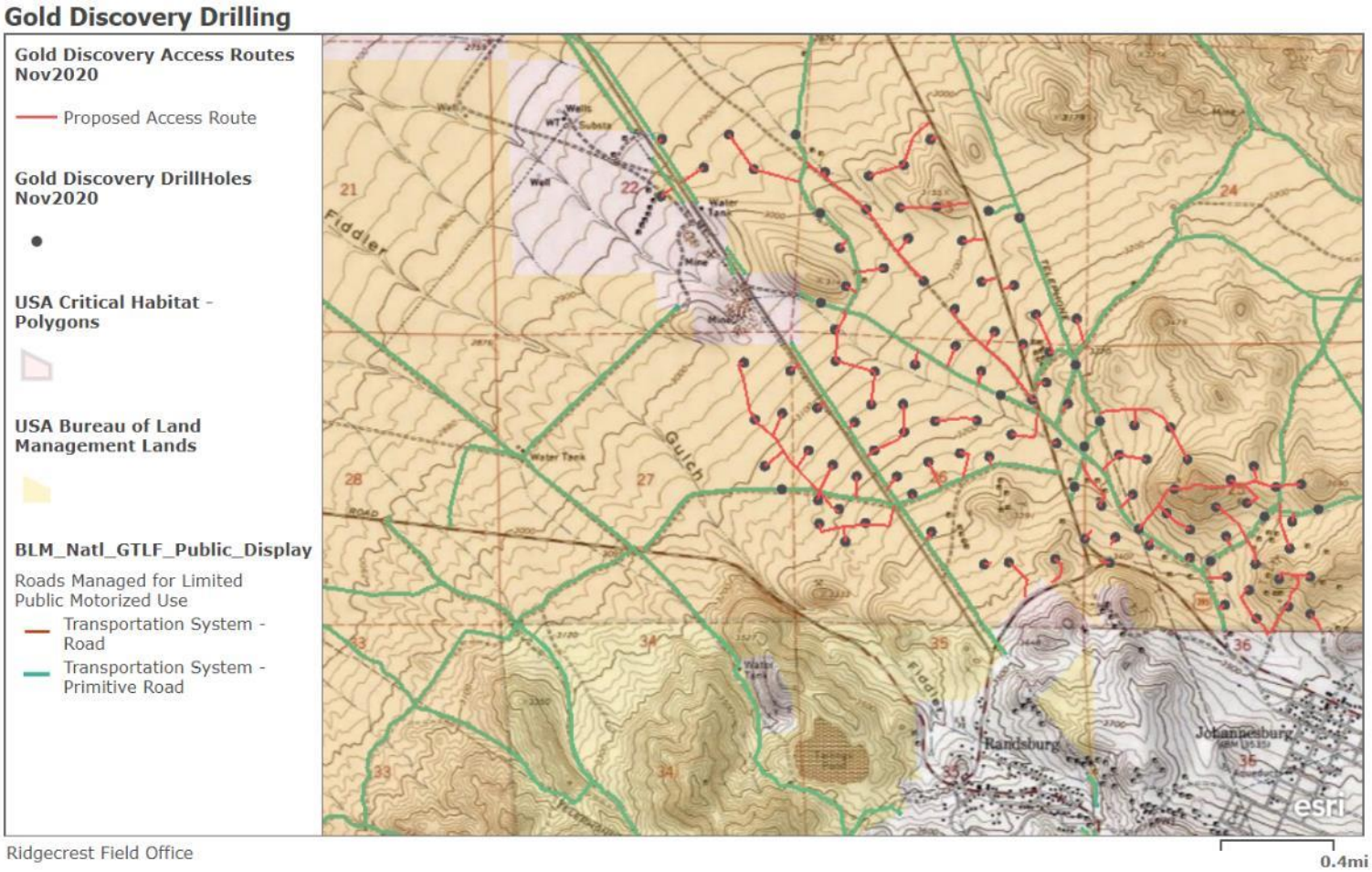
Appendix A: Maps and Figures



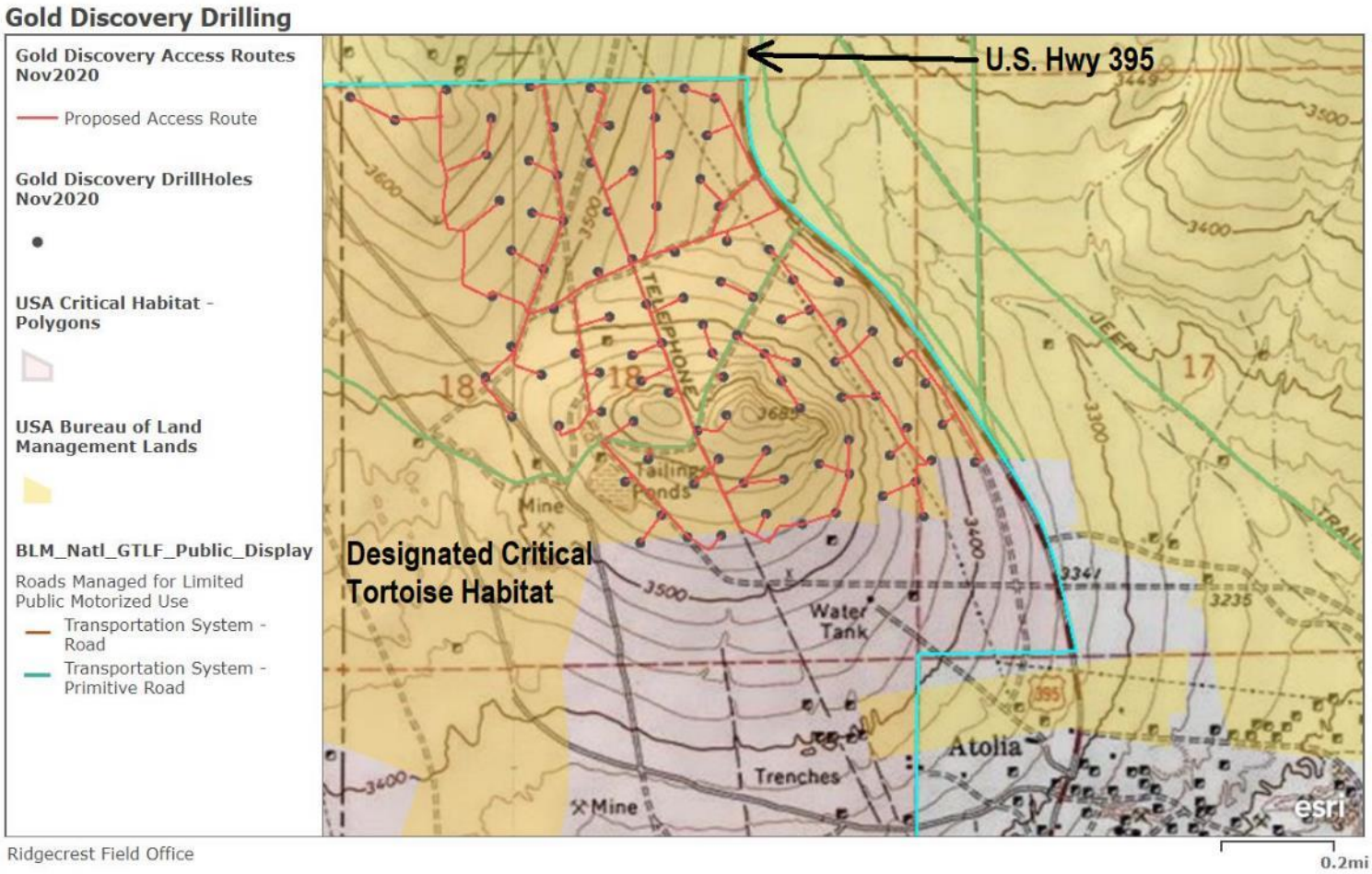
Map 1. General location of the proposed action



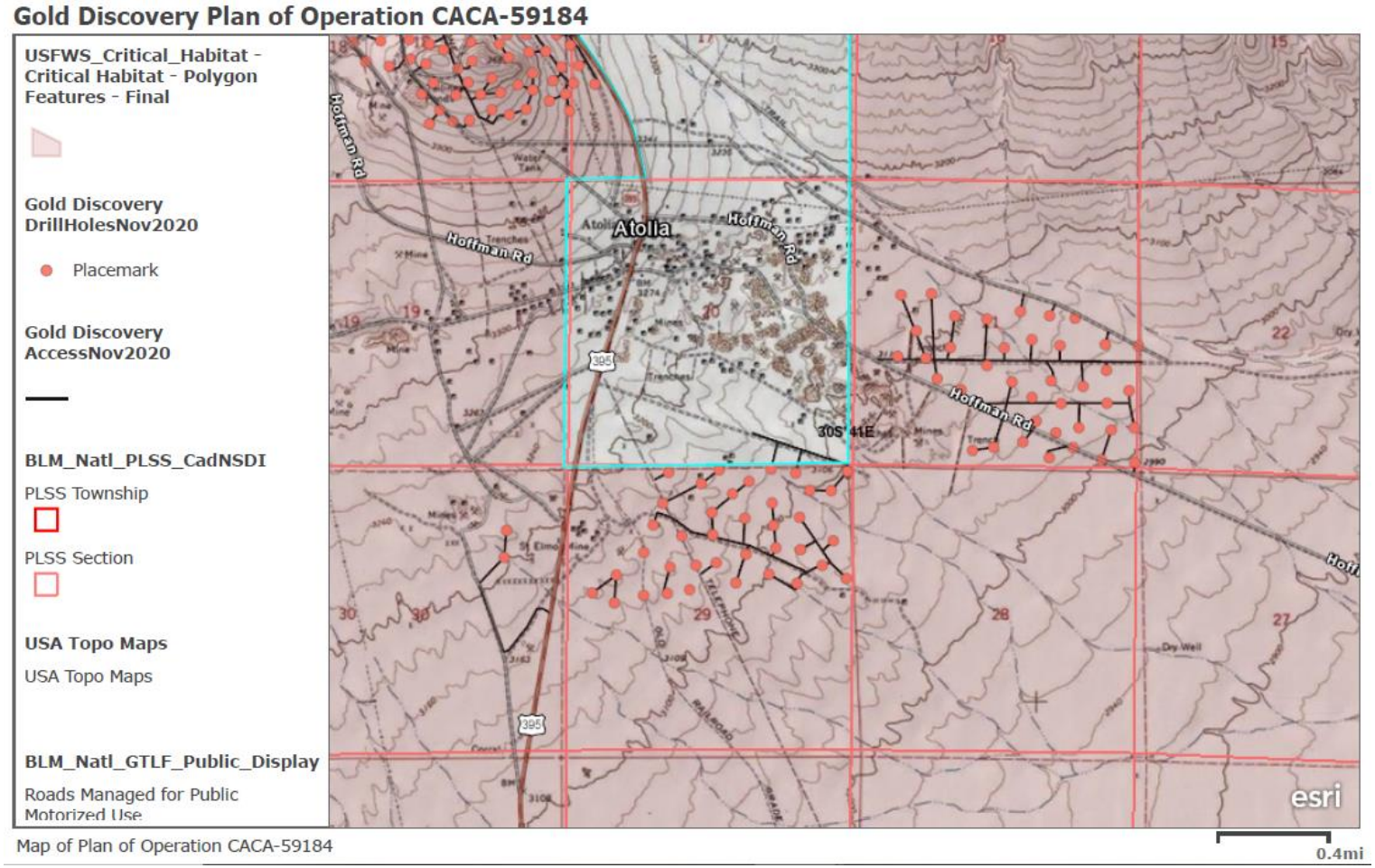
Map 2. Relationship of drilling area(s) to the Fremont-Kramer ACEC and the Tortoise Critical Habitat designated by U.S. Fish & Wildlife Service. The areas are north of Johannesburg, north of Atolia and south of Atolia, California (sites available at https://arcg.is/1WCmLW0).



Map 3. Proposed drilling sites, access routes, authorized public travel routes, and translinear features northerly of Johannesburg and Randsburg, California (See https://arcg.is/0CeKH8).



Map 4. Drilling locations north and west of Atolia, CA (https://arcg.is/1fK8nC1).



Map 5. Drilling locations east and south of Atolia, CA (https://arcg.is/1j8uu52).

Appendix B: Project Photographs

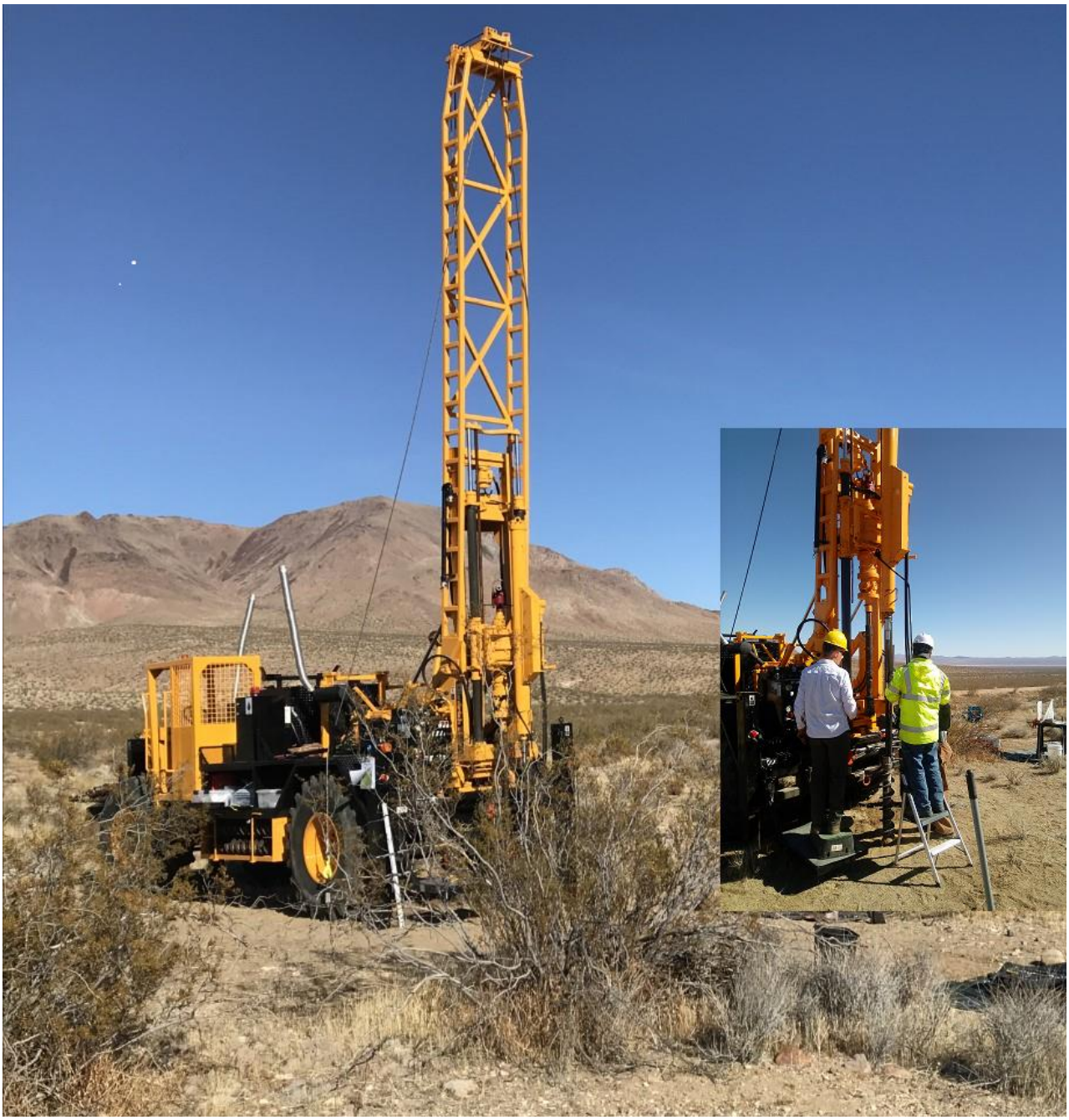


Photo 1. Rubber-tired hollow-stem drilling auger with drilling mast in upright position. Taken during notice-level operations outside the Fremont-Kramer Area of Critical Environmental Concern.

Photo 2. View of drill rig on the east side of U.S. Hwy 395, outside of designated Tortoise Critical Habitat.

Photo 3. Representative pre-drilling photograph (dated January 12, 2021) of a drill site (Hole #98, CACA-59130) associated with an exploratory drilling project similar to the current Proposed Action.

Photo 4. Representative post-drilling, post-reclamation photograph of a drill site (Hole #98, CACA-59130, east of Highway 395) associated with an exploratory drilling project similar to the current Proposed Action. In this photograph, taken January 2023 (approximately two years after the drilling activities), little to no evidence of impact remains visible.

Photo 5. Representative post-drilling, post-reclamation photograph of a drill site (Hole #99, CACA-59130, east of Highway 395) associated with an exploratory drilling project similar to the current Proposed Action. In this photograph, taken in January 2023 (approximately two years after the drilling activities), little to no evidence of impact remains visible.

Photo 6. Representative pre-drilling photograph (dated February 23, 2021) of a drill site (Hole #99, CACA-59130) associated with an exploratory drilling project similar to the current Proposed Action.

Photo 7. Example of pre-disturbance conditions as of January 2023, within the vicinity of proposed Hole # 216. The view faces north from the Randsburg exit of Highway 395.

Photo 8. View from the Garlock Road intersection with U.S. Hwy 395, facing southerly, showing the proposed drilling area to either side of U.S. Hwy 395 in Fremont Valley.

Appendix C: Required Performance Standards

43 CFR 3809.420

§ 3809.420 What performance standards apply to my notice or plan of operations?

The following performance standards apply to your notice or plan of operations:

(a) *General performance standards —*

(1) *Technology and practices.* You must use equipment, devices, and practices that will meet the performance standards of this subpart.

(2) *Sequence of operations.* You must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence.

(3) *Land-use plans.* Consistent with the mining laws, your operations and post-mining land use must comply with the applicable BLM land-use plans and activity plans, and with coastal zone management plans under 16 U.S.C. 1451, as appropriate.

(4) *Mitigation.* You must take mitigation measures specified by BLM to protect public lands.

(5) *Concurrent reclamation.* You must initiate and complete reclamation at the earliest economically and technically feasible time on those portions of the disturbed area that you will not disturb further.

(6) *Compliance with other laws.* You must conduct all operations in a manner that complies with all pertinent Federal and state laws.

(b) *Specific standards —*

(1) *Access routes.* Access routes shall be planned for only the minimum width needed for operations and shall follow natural contours, where practicable to minimize cut and fill. When the construction of access routes involves slopes that require cuts on the inside edge in excess of 3 feet, the operator may be required to consult with the authorized officer concerning the most appropriate location of the access route prior to commencing operations. An operator is entitled to access to his operations consistent with provisions of the mining laws. Where a notice or a plan of operations is required, it shall specify the location of access routes for operations and other conditions necessary to prevent unnecessary or undue degradation. The authorized officer may require the operator to use existing roads to minimize the number of access routes, and, if practicable, to construct access roads within a designated transportation or utility corridor. When commercial hauling is involved and the use of an existing road is required, the authorized officer may require the operator to make appropriate arrangements for use and maintenance.

(2) *Mining wastes.* All tailings, dumps, deleterious materials or substances, and other waste produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation and in accordance with applicable Federal and state Laws.

(3) *Reclamation.*

(i) At the earliest feasible time, the operator shall reclaim the area disturbed, except to the extent necessary to preserve evidence of mineralization, by taking reasonable measures to prevent or control on-site and off-site damage of the Federal lands.

(ii) Reclamation shall include, but shall not be limited to:

(A) Saving of topsoil for final application after reshaping of disturbed areas have been completed;

(B) Measures to control erosion, landslides, and water runoff;

(C) Measures to isolate, remove, or control toxic materials;

(D) Reshaping the area disturbed, application of the topsoil, and revegetation of disturbed areas, where reasonably practicable; and

(E) Rehabilitation of fisheries and wildlife habitat.

(iii) When reclamation of the disturbed area has been completed, except to the extent necessary to preserve evidence of mineralization, the authorized officer shall be notified so that an inspection of the area can be made.

(4) *Air quality.* All operators shall comply with applicable Federal and state air quality standards, including the Clean Air Act (42 U.S.C. 1857 *et seq.*).

(5) *Water quality.* All operators shall comply with applicable Federal and state water quality standards, including the Federal Water Pollution Control Act, as amended (30 U.S.C. 1151 *et seq.*).

(6) *Solid wastes.* All operators shall comply with applicable Federal and state standards for the disposal and treatment of solid wastes, including regulations issued pursuant to the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*). All garbage, refuse or waste shall either be removed from the affected lands or disposed of or treated to minimize, so far as is practicable, its impact on the lands.

(7) *Fisheries, wildlife and plant habitat.* The operator shall take such action as may be needed to prevent adverse impacts to threatened or endangered species, and their habitat which may be affected by operations.

(8) *Cultural and paleontological resources.*

(i) Operators shall not knowingly disturb, alter, injure, or destroy any scientifically important paleontological remains or any historical or archaeological site, structure, building or object on Federal lands.

(ii) Operators shall immediately bring to the attention of the authorized officer any cultural and/or paleontological resources that might be altered or destroyed on Federal lands by his/her operations and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his/her attention, take action to protect or remove the resource, and allow operations to proceed within 10 working days after notification to the authorized officer of such discovery.

(iii) The Federal Government shall have the responsibility and bear the cost of investigations and salvage of cultural and paleontology values discovered after a plan of operations has been approved, or where a plan is not involved.

(9) *Protection of survey monuments.* To the extent practicable, all operators shall protect all survey monuments, witness corners, reference monuments, bearing trees and line trees against unnecessary or undue destruction, obliteration or damage. If, in the course of operations, any monuments, corners, or accessories are destroyed, obliterated, or damaged by such operations, the operator shall immediately report the matter to the authorized officer. The authorized officer shall prescribe, in writing, the requirements for the restoration or reestablishment of monuments, corners, bearing and line trees.

(10) *Fire.* The operator shall comply with all applicable Federal and state fire laws and regulations and shall take all reasonable measures to prevent and suppress fires in the area of operations.

(11) *Acid-forming, toxic, or other deleterious materials.* You must incorporate identification, handling, and placement of potentially acid-forming, toxic or other deleterious materials into your operations, facility design, reclamation, and environmental monitoring programs to minimize the formation and impacts of acidic, alkaline, metal-bearing, or other deleterious leachate, including the following:

(i) You must handle, place, or treat potentially acid-forming, toxic, or other deleterious materials in a manner that minimizes the likelihood of acid formation and toxic and other deleterious leachate generation (source control);

(ii) If you cannot prevent the formation of acid, toxic, or other deleterious drainage, you must minimize uncontrolled migration of leachate; and

(iii) You must capture and treat acid drainage, or other undesirable effluent, to the applicable standard if source controls and migration controls do not prove effective. You are responsible for any costs associated with water treatment or facility maintenance after project closure. Long-term, or post-mining, effluent capture and treatment are not acceptable substitutes for source and migration control, and you may rely on them only after all reasonable source and migration control methods have been employed.

(12) *Leaching operations and impoundments.*

(i) You must design, construct, and operate all leach pads, tailings impoundments, ponds, and solution-holding facilities according to standard engineering practices to achieve and maintain stability and facilitate reclamation.

(ii) You must construct a low-permeability liner or containment system that will minimize the release of leaching solutions to the environment. You must monitor to detect potential releases of contaminants from heaps, process ponds, tailings impoundments, and other structures and remediate environmental impacts if leakage occurs.

(iii) You must design, construct, and operate cyanide or other leaching facilities and impoundments to contain precipitation from the local 100-year, 24-hour storm event in addition to the maximum process solution inventory. Your design must also include allowances for snowmelt events and draindown from heaps during power outages in the design.

(iv) You must construct a secondary containment system around vats, tanks, or recovery circuits adequate to prevent the release of toxic solutions to the environment in the event of primary containment failure.

(v) You must exclude access by the public, wildlife, or livestock to solution containment and transfer structures that contain lethal levels of cyanide or other solutions.

(vi) During closure and at final reclamation, you must detoxify leaching solutions and heaps and manage tailings or other process waste to minimize impacts to the environment from contact with toxic materials or leachate. Acceptable practices to detoxify solutions and materials include natural degradation, rinsing, chemical treatment, or equally successful alternative methods. Upon completion of reclamation, all materials and discharges must meet applicable standards.

(vii) In cases of temporary or seasonal closure, you must provide adequate maintenance, monitoring, security, and financial guarantee, and BLM may require you to detoxify process solutions.

(13) *Maintenance and public safety.* During all operations, the operator shall maintain his or her structures, equipment, and other facilities in a safe and orderly manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to alert the public in accordance with applicable Federal and state laws and regulations.

Appendix D. Measures Authorized by USFWS

BLM initiated consultation in the form of an 'Activity Request Form' submitted from BLM in December 2022 and authorized by U.S. Fish & Wildlife Service File No. 2023-0029507-S7-001 on January 3, 2023. The Activity Request Form process conforms with programmatic biological opinion FWS-KRN/SBD/INY/LA/IMP/RIV-17B0532-17F1029. The following measures were accepted and authorized by USFWS.

• LUPA-BIO-5: All workers engaged in activity will be educated about the desert tortoise, including awareness on its legal status, activity patterns, and avoidance measures.

• LUPA-BIO-2: A designated biologist would be on-site during excavations and equipment movement as needed to ensure avoidance and minimization measures are appropriately implemented. Only an USFWS Authorized biologist can move desert tortoises from harm's way if halting equipment does not fully protect the desert tortoise or results in delays to project activities. The authorized biologist must move the desert tortoise the shortest distance possible into appropriate habitat to provide for its safety.

• LUPA-BIO-6: Subsidized predator standards will be implemented. All trash and food items shall be promptly contained within closed, raven-proof containers or placed out of site in vehicles with closed windows. This also includes "micro-trash", such as screws, washers, small electrical components, etc.

• LUPA-BIO-7: Disturbed areas will be restored to BLM approved standards.

• LUPA-BIO-10: Weed management practices would be implemented as part of the Proposed Action operations including but not limited to vehicle cleaning, use of weed-free materials, and monitoring.

• LUPA-BIO-13: Avoid unnecessary surface disturbance.

• LUPA-BIO-14: Feeding of wildlife, leaving of food or trash as an attractive nuisance to wildlife, collection of native plants, or harassing of wildlife on a site is prohibited. Any wildlife encountered during an activity, including construction, operation, and decommissioning will be allowed to leave the area unharmed. Domestic pets are prohibited on sites. All construction materials will be visually checked for the presence of wildlife prior to their movement or use. Any wildlife encountered during these inspections will be allowed to leave the construction area unharmed. All drill holes used during the project will be covered, except when being actively used, to prevent entrapment of wildlife. Minimize natural vegetation removal through implementation of crush and drive or cut or mow vegetation rather than removing entirely.

• LUPA-BIO-IFS8: Check under vehicles and equipment for tortoises before moving. If a tortoise is found underneath one, operator must wait until it leaves on its own accord.

• LUPA-BIO-IFS9: Vehicular traffic will not exceed 15 miles per hour on BLM access roads and within the project area.